

State of Colorado  
Oil and Gas Conservation Commission

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

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: 100185		4. Contact Name: Charlie Jensen		Complete the Attachment Checklist OP OGCC	
2. Name of Operator: Encana Oil and Gas (USA) Inc.		Phone: 970-285-2735			
3. Address: 2717 County Road 715, Suite 100		Fax: 970-285-2636			
City: Parachute State: CO Zip: 81635					
5. API Number: 05		OGCC Facility ID Number: 429326		Survey Plat	
6. Well/Facility Name: F12E "poly" pipeline release		7. Well/Facility Number: NA		Directional Survey	
8. Location (Qtr/Sec. Twp. Rng. Meridian): SWSE, Section 3, 7S, 92W, 6th				Surface Equipmt Diagram	
9. County: Garfield		10. Field Name: Mammi		Technical Info Page	
11. Federal, Indian or State Lease Number: NA				Other	

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)		<table border="1"> <tr> <td>Change of Surface Footage from Exterior Section Lines</td> <td>ENLFSL</td> <td>FEUFWL</td> </tr> <tr> <td>Change of Surface Footage to Exterior Section Lines</td> <td></td> <td></td> </tr> <tr> <td>Change of Bottomhole Footage from Exterior Section Lines</td> <td></td> <td></td> </tr> <tr> <td>Change of Bottomhole Footage to Exterior Section Lines</td> <td></td> <td></td> </tr> </table>		Change of Surface Footage from Exterior Section Lines	ENLFSL	FEUFWL	Change of Surface Footage to Exterior Section Lines			Change of Bottomhole Footage from Exterior Section Lines			Change of Bottomhole Footage to Exterior Section Lines		
Change of Surface Footage from Exterior Section Lines	ENLFSL	FEUFWL													
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/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 _____															
<input type="checkbox"/> CHANGE SPACING UNIT Formation _____ Formation Code _____ Spacing order number _____ Unit Acreage _____ Unit configuration _____		<input type="checkbox"/> Remove from surface bond Signed surface use agreement attached													
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling): Effective Date _____ Plugging Bond <input type="checkbox"/> Blanket <input type="checkbox"/> Individual		<input type="checkbox"/> CHANGE WELL NAME From: _____ To: _____ Effective Date: _____													
<input type="checkbox"/> ABANDONED LOCATION: Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No Date Ready for inspection: _____		<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS Date well shut in or temporarily abandoned _____ Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No MIT required if shut in longer than two years Date of last MIT _____													
<input type="checkbox"/> SPUD DATE: _____		<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)													
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK Method used _____ Cementing tool setting/perm depth _____ Cement volume _____ Cement top _____ Cement bottom _____ Date _____ *submit cbl and cement job summaries															
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004 Final reclamation will commence on approximately _____ <input type="checkbox"/> Final reclamation is completed and site is ready for inspection															

Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent Approximate Start Date: _____		<input checked="" type="checkbox"/> Report of Work Done Date Work Completed: 10/11/2012	
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"/> Change Drilling Plans <input type="checkbox"/> Gross Interval Changed? <input type="checkbox"/> Casing/Cementing Program Change		<input type="checkbox"/> Request to Vent or Flare <input type="checkbox"/> Repair Well <input type="checkbox"/> Rule 502 variance requested <input type="checkbox"/> Other: _____	
		<input type="checkbox"/> E&P Waste Disposal <input type="checkbox"/> Beneficial Reuse of E&P Waste <input checked="" type="checkbox"/> Status Update/Change of Remediation Plans 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: Charlie Jensen Date: 10/11/2012 Email: charles.jensen@encana.com  
Print Name: Charlie Jensen Title: Special Projects/Hydrogeologist

LOGCC Approved: [Signature] Title: 12/17/12 Date: 12/17/12  
CONDITIONS OF APPROVAL OF ANY: Env. Sup.

Complaint # 200353851 = closed  
REM # 7129 = closed  
Fm 27 200355205 = closed

FORM  
4  
Rev 12/05

Page 2

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- |  |                            |
|--|----------------------------|
| 1. OGCC Operator Number: 100185  | API Number: 05             |
| 2. Name of Operator: Encana Oil and Gas (USA) Inc.                           | OGCC Facility ID #: 429326 |
| 3. Well/Facility Name: F12E "poly" pipeline release                          | Well/Facility Number: NA   |
| 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSE, Section 3, 7S, 92W, 6th |                            |

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

Please see attached report referencing NOAV #200355205.



**EnCana Oil & Gas (USA) Inc.**

2717 County Road 215  
Suite 100  
Parachute CO USA 81635

tel: (970) 285-2600  
fax: (970) 285-2636  
www.encana.com

Ms. Linda Spry O'Rourke

October 11, 2012

Environmental Protection Specialist, Northwest Region  
Colorado Oil and Gas Conservation Commission (COGCC)  
707 Wapiti Court  
Suite 204  
Rifle, CO 81650

RE: NOAV #200355205 (Non-Facility ID 429326) Dry Hollow Pipeline Release 6/16/2012

Dear Linda,

Encana Oil and Gas (USA), Inc. (Encana) has prepared the following comprehensive and interpretive report summarizing the investigation associated with the above referenced NOAV. The NOAV was issued due to a pipeline failure and subsequent release of produced water which entered the surface water of the Davis Irrigation Ditch located at NENW Section 10, 7S, 92W, 6<sup>th</sup> post meridian.

#### **Brief Summary of Initial Incident**

On June 16, 2012, a fusion coupler failed along a 12-inch poly-pipeline buried approximately 8 feet below grade. The pipeline was being used to transport treated and recycled produced water from the Hunter Mesa Water Treatment Facility for the support of fracing and completions work located at the F12E well pad. During movement of the produced water, a rapid drop in line pressure was noticed and the line was immediately shut in. The leak area was discovered and water vacuum trucks were deployed to recover free liquids. Due to response time and flow rate calculations, approximately 51 barrels (bbls) of produced water were lost while the line was under pressure, and 31 bbls were lost after the section of line was isolated and under no pressure, for a total of 82 bbls. A detailed written engineering evaluation of the pipeline failure was completed and submitted to the COGCC on July 17, 2012 with pipeline pressure testing data submitted on July 19, 2012.

Encana personnel performed initial sampling activities in response to the pipeline release. Two soil and four water samples were collected from the affected area. The COGCC also retained a contractor and sampled two domestic wells and a cistern. The COGCC submitted reports to each of the three landowners in July 2012. Based on the data collected by the COGCC, initial samples did not indicate impacts from oil and gas activities in the area. A summary of the Encana's initial response sampling results are discussed later in this report.

#### **Summary of Scope of Work/Work Plan**

Per the NOAV issued by the COGCC, a work plan was submitted and approved on July 10, 2012. The work plan to investigate possible impacts to the Davis Ditch/Dry Hollow Creek included the following:

- A desktop and field reconnaissance well search to identify domestic water wells, relevant springs, ponds, and other water features downgradient of the point of release. The well and water feature search includes an area downgradient of the release to the northern edge of NESE Section 27, 6S, 92W, 6<sup>th</sup> meridian (see Figure 1). A list of Davis Ditch/Dry Hollow users is compiled with contact information, contact dates, and user response. Landowner name, water usage, contact date, landowner response, water feature sampled, and date collected are noted (Table 1). The sampling program included collecting water samples from the Guthrie well, Schultz well, and Janice Hunt spring



(cistern) utilizing an analytical suite provided by COGCC (see attached) targeting a date no later than July 13, 2012 (for Schultz) and again by September 10, 2012. These three locations were previously sampled by a consultant retained by the COGCC directly. As field reconnaissance was completed and owners of well or surface water were contacted, a total of eight landowner water wells and/or cisterns were incorporated into the sampling program as appropriate. A representative from Olsson and Associates (third party) performed the sampling activities. Laboratory data will be submitted to each landowner under a cover letter from Olsson and Associates.

- A representative sample of the Exploration and Production waste released was collected from the “treated” produced water pond located at Encana’s Hunter Mesa Water Treatment Facility. The data is discussed later in this report.

#### **Initial Spill Response/COGCC water sampling/Domestic Water Sampling**

On June 16, 2012, Encana personnel responded to the call of the pipeline release. During the initial response, it was noted that no visible sheen or odor was observed at Dry Hollow Creek or Davis Ditch. Field test strips for chloride were used at various locations between the spill location and the Davis Ditch headgate. The test strips did not register measurable chloride. On June 18, 2012, two soil samples and four water samples were collected for analyses according to Table 910-1. One soil sample was collected at the point of release, location 12, and another was collected across the road where the produced water travelled on the ground surface toward Dry Hollow Creek (location 9). Each sample location was marked with a GPS and is noted on the attached Figure 1f. Two of the water samples were collected at specific locations along Dry Hollow Creek (sample location number 8 and 11 on Figure 2). One of the water samples, location 7, was collected within Davis Ditch and the specific location was pointed out by Tim Guthrie, a landowner who manages the Davis Ditch, noting some brown scum floating on the water in the ditch. The final water sample, location 6, was collected from an irrigation cistern directly tied into the Davis Ditch (Tom Schickling’s cistern). The sample locations are shown on Figure 2. Figures 1 and 2 also illustrate the extent of Davis Ditch and Dry Hollow Creek.

The COGCC retained a contractor to collect water samples from the Guthrie water well, Janice Hunt’s cistern (spring-fed), and the Schultz water well on June 22, 2012. The COGCC sent subsequent letters, with laboratory data attached, to each of the landowners. The initial review of the well sampling data does not appear to show an impact to the water wells/cistern from oil and gas activities in the area.

Encana retained a third party consultant (Olsson and Associates) to implement the water sampling program from select domestic water wells which may be influenced by Davis Ditch or Dry Hollow Creek. Per the approved NOAV scope of work, two rounds of sampling occurred. On July 5, 2012 and July 13, 2012 (Round 1), water samples were collected from a combination of six domestic wells, one irrigation well, and one cistern. An additional sample was collected from Encana’s Hunter Mesa Water Treatment Facility (North Pond) as a representative sample of the produced water that was lost during the pipeline failure. The Janice Hunt cistern (spring), which the COGCC sampled on June 22, 2012, was dry and could not be sampled. On September 5, 2012 and September 10, 2012 (Round 2), water samples were collected from the same six domestic wells, one irrigation well, and one cistern.

During the water sampling program, water quality field parameters and notes were documented for each sample collected. The water samples were immediately placed on ice after sample collection and shipped under Chain-of-Custody procedures to Environmental Science Corporation (ESC) for laboratory analysis. Samples were received in good condition within appropriate temperatures by ESC. The COGCC provided an analytical suite to analyze each water sample and is attached for reference.

#### **Soil and Groundwater Analytical Results**

Two soil samples were collected (F12E pipeline spill soil 1 and F12E pipeline spill soil 2) on June 18, 2012 to determine impacts, if any, to the soil surrounding the pipeline and the dry stormwater drainage upgradient from Dry Hollow Creek. The soil sample from the source area of impact (F12E pipeline spill soil 1) reported all



compounds of concern (COC) below the COGCC Table 910-1 limits, including sodium adsorption ratio (SAR) at 10). The second soil sample reported the COC below Table 910-1 limits with the exception of SAR, which was reported at 14 (Table 910-1 standard is 12). Since the source area soil was below 12 for SAR, the second soil sample with SAR at 14 may be attributed to high alkaline soils. It is noted that no soil staining or stressed vegetation was observed.

In addition to the two soil samples collected on June 18, 2012, four water samples were collected and analyzed for Table 910-1 for water. One of the water samples was collected from Dry Hollow Creek above the confluence of Davis Ditch. One of the water samples was collected from Dry Hollow Creek below the confluence of Davis Ditch. Another water sample was collected from Davis Ditch (with Mr. Tim Guthrie's direction and observation of "brown scum") above the Guthrie and Schickling residences, and the fourth water sample was collected from the Schickling cistern. Three of the water samples reported COC below the Table 910-1 standards for water. The Schickling cistern reported COC below Table 910-1 with the exception of benzene which was reported at 0.0051 mg/L, a tenth of a part per million above the standard. It should be noted that the two subsequent water samples from the Schickling cistern and all the water samples upgradient and neighboring properties did not report detectable benzene concentrations. No visible sheens, unusual field parameters, or odors were observed. The cistern had plentiful algal growth on each concrete wall.

Based on the desktop and field reconnaissance of the Davis Ditch and Dry Hollow Creek users, landowner notification and response, a total of six domestic water wells, one irrigation well, and one cistern were sampled on July 5 or 13, 2012 (Round 1) and September 5 or 10, 2012 (Round 2). Again, Figure 1 shows each sample location and Table 1 documents the landowner responses and rationale for the eight sample locations.

Field parameters were obtained during sample collection which included pH, temperature, specific conductance, dissolved oxygen, oxygen reduction potential (ORP), turbidity, total dissolved solids (TDS), and salinity with a Horiba® U-52 water quality meter. The field notes which document the field parameters from the sampling program are attached for reference (Attachment C). The water samples were analyzed for an expanded suite, including the Table 910-1 COCs per the COGCC's request. The analytical data reported for the water samples for both Round 1 and Round 2 do not appear to show any impacts to the domestic water wells, irrigation well, or cistern from the pipeline spill. Summary tables containing the laboratory results are included as Attachment D, with Colorado Department of Public Health and Environment (CDPHE) standards for reference. The complete laboratory reports are also included in the attachments.

Per the NOAV, a representative water sample from the Hunter Mesa Water Treatment Facility was collected from the North Pond which provides water storage after it has been treated through the DAF (Dissolved Air Flootation) Unit. Despite the results of this sample, no impacts resulting from the spill have been identified. A summary of the data is included in table format in the laboratory data attachment along with the complete laboratory reports.

Separate water quality reports have been sent to each individual land owner from Olsson and Associates with a summary of their respective laboratory data. If you have any comments or questions regarding this summary report, please feel free to contact me at 970-285-2735 or email [Charles.jensen@encana.com](mailto:Charles.jensen@encana.com). Based upon the soil quality data at the source and the water quality data from Round 1 and Round 2 sampling events, there is no indication of impact from the pipeline release. Encana requests that NOAV 200355205 be closed.

Regards,



Charles H. Jensen, Jr., C.P.G., P.G.

Special Projects/Hydrogeologist

Attachments

## TABLE

**Table 1**

**Davis Ditch and Dry Hollow Creek Users and Response**

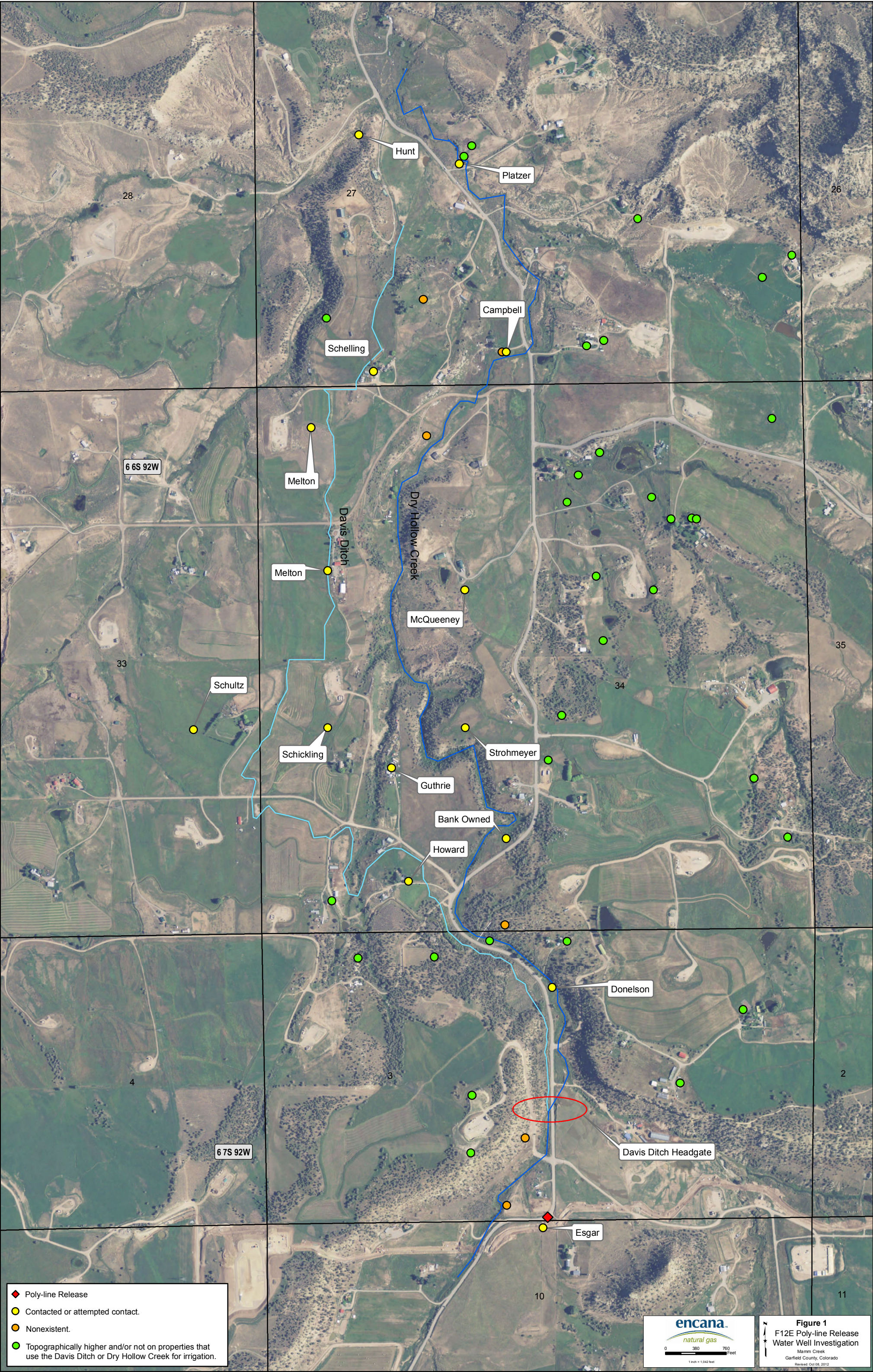
Landowner Name	Water Usage	Contact Date	Landowner Response	Water Feature Sampled and Date collected	Sample Location Number
Esgar	Does not use ditch or creek; spill occurred on property	7/10/2012	Approval to sample well	Domestic well 7/13/12 and 9/5/12	13
Donelson	Domestic well adjacent to Dry Hollow Creek	7/9/2012	Approval to sample well	Domestic well 7/13/12 and 9/5/12	10
Guthrie	Davis Ditch user	6/29/2012	Approval to sample well	Domestic well 7/5/12 and 9/10/12	4
Schickling	Davis Ditch user	6/18/2012	Approval to sample cistern	Cistern 6/18/12, 7/5/12, and 9/5/12	6
Schultz	Davis Ditch user	7/10/2012	Approval to sample well	Domestic well 7/13/12 and 9/5/2012	5
Melton	Davis Ditch user	6/29/2012	Approval to sample well	Domestic well and irrigation well 7/5/2012 and 9/5/2012	2 and 3
Schelling	Davis Ditch user	7/5/2012	Approval to sample well	Domestic well 7/5/2012 and 9/5/2012	1
Hunt	Various upgradient irrigations recharge spring	6/29/2012	Approval BUT cistern/spring is dry	Cistern/spring is dry	
Platzer	Dry Hollow Creek	NA	No answer and alternate phone # not available	None	
Rifle Land and Cattle	Dry Hollow Creek	NA	Bank owned – not occupied	None	
Strohmeyer	Dry Hollow Creek	NA	Phone # not available	None	
McQueeney	Dry Hollow Creek	NA	Phone # not available (out-of state?)	None	
Campbell	Dry Hollow Creek	NA	Phone # not available	None	
Howard	Davis Ditch User?	NA	No answer and alternate phone # not available	None	

\*Note: All other domestic wells identified during the desktop or field reconnaissance were either nonexistent, topographically higher and/or not on properties that use Davis Ditch or Dry Hollow Creek for irrigation. Due to the lack of precipitation, most springs or ponds were dry or no longer hydraulically connected to Davis Ditch or Dry Hollow Creek. Guthrie and Schickling share the same domestic well.

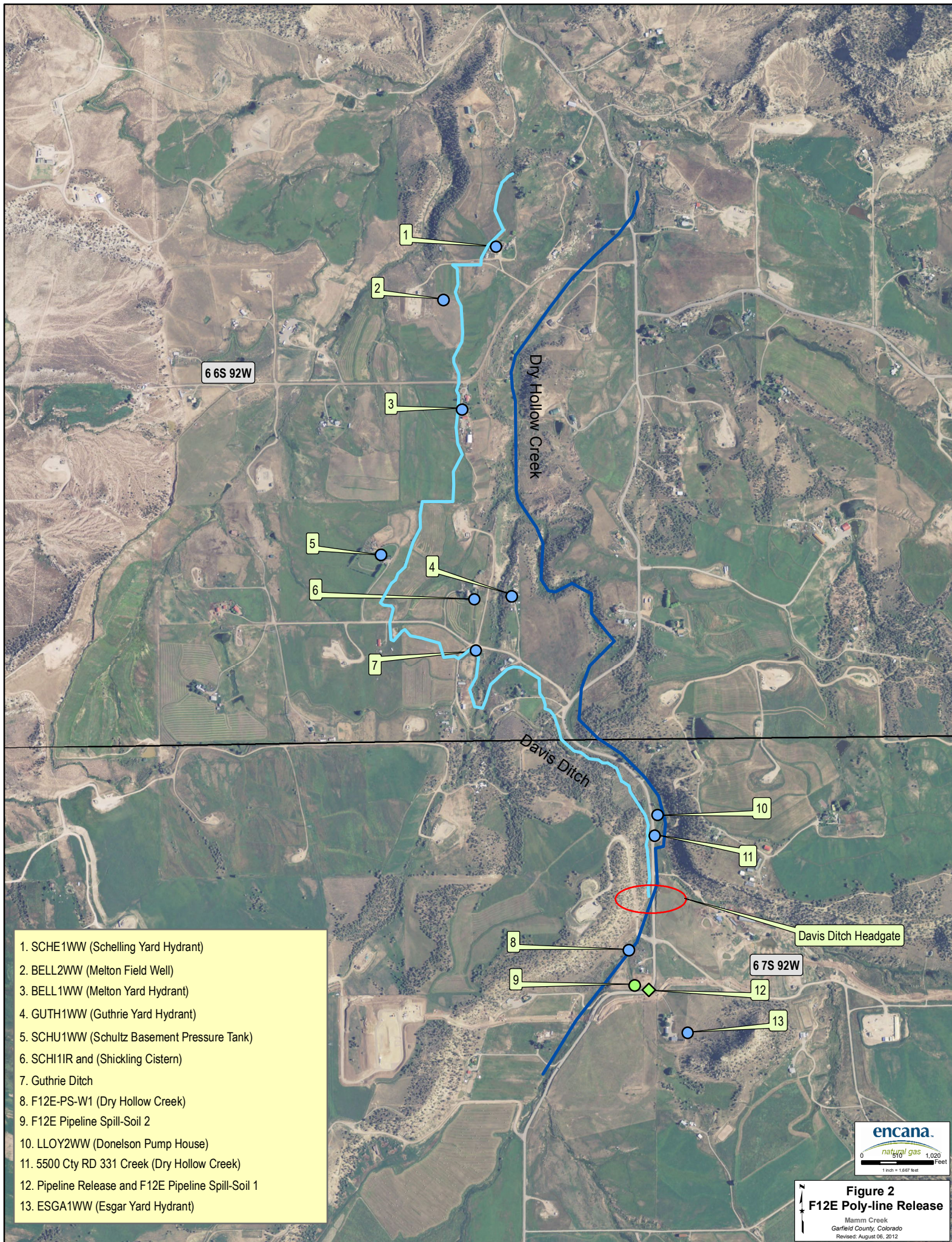


## FIGURES











**ATTACHMENTS**  
**(COGCC ANALYTICAL SUITE, LAB DATA, AND FIELD NOTES)**

## NOAV # 200355205 Attachment

page 2 of 2

Operator: Encana

Facility 429326

Location SWSE 7 6S 92W

Garfield County

## COGCC Analytical Suite:

Analysis	Method	Analyte list
SPECIFIC CONDUCTIVITY	EPA120.1	
PH	EPA150.1	
TOTAL DISSOLVED SOLIDS	EPA160.1	
Dissolved METALS - ICP	EPA200.7	BARIUM BORON CALCIUM CHROMIUM COBALT COPPER IRON LITHIUM MAGNESIUM MANGANESE NICKEL POTASSIUM SILICON SODIUM STRONTIUM VANADIUM ZINC
Dissolved Metals	EPA200.8	ANTIMONY ARSENIC MOLYBDENUM SELENIUM <del>URANIUM</del>
Alkalinity	EPA310.1	BICARBONATE AS CaCO <sub>3</sub> CARBONATE AS CaCO <sub>3</sub> HYDROXIDE TOTAL ALKALINITY AS CaCO <sub>3</sub>
Mercury	E245.1	
Inorganic anions	EPA300.0	BROMIDE CHLORIDE FLUORIDE SULFATE
Dissolved methane	RSK175	ETHANE ETHENE METHANE
GASOLINE RANGE ORGANICS	SW8015	
DIESEL RANGE ORGANICS	SW8015MCALUFT	
Semi-VOAs	SW8270	
VOAs	SW8260	
SODIUM ADSORPTION RATIO	lab calculated	
Total Organic Carbon	Method 413.1	
field observation:	sediment (present or absent)	
field observation:	odor	
field observation:	effervescence	
field observation:	particulates (present or absent, color)	
field observation:	color	
field reading:	temperature	
field reading:	volume/rate of purging	

*per Linda COGCC*

Sample ID: LLOY2WW  
 Landowner: Dean Donelson  
 Date of Sampling: 07/13/12 and 09/05/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/13/12	09/05/12	Level	Standard
Bromide	mg/l	2.0	2.2	none	NA
Chloride	mg/l	650	680	250	1,2
Fluoride	mg/l	2.8	2.8	4	2
Sulfate	mg/l	550	530	250	1,2
Alkalinity	mg/l	360	290	none	NA
Alkalinity, Bicarbonate	mg/l	360	290	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	1.3	3.1	none	NA
Ethane	mg/l	BDL (0.026)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.026)	BDL (0.013)	none	NA
pH	su	7.9	8.0	6.5-8.5	2
Specific Conductance	umhos/cm	3700	4000	none	NA
Dissolved Solids*	mg/l	2200	2200	500	2
Arsenic	mg/l	0.015	0.017	0.01	1,2
Barium	mg/l	0.066	0.069	2	2
Boron	mg/l	BDL (0.20)	BDL (0.20)	none	NA
Calcium	mg/l	64.0	67.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	BDL (0.020)	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	4.6	3.6	none	NA
Manganese	mg/l	0.11	0.11	0.05	1,2
Potassium	mg/l	1.7	1.8	none	NA
Selenium	mg/l	0.0098	0.0050	0.05	1,2
Sodium	mg/l	740	790	none	NA
Strontium	mg/l	2.1	2.2	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based n cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)



Sample ID: SCHU1WW

Landowner: Kurt Schultz

Date of Sampling: 07/13/12 and 09/05/12

Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/13/12	09/05/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	100	100	250	1,2
Fluoride	mg/l	1.9	1.7	4	2
Sulfate	mg/l	1200	1400	250	1,2
Alkalinity	mg/l	230	180	none	NA
Alkalinity, Bicarbonate	mg/l	230	180	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	8.1	8.2	6.5-8.5	2
Specific Conductance	umhos/cm	3000	3600	none	NA
Dissolved Solids*	mg/l	2100	2400	500	2
Arsenic	mg/l	0.0054	0.0057	0.01	1,2
Barium	mg/l	0.013	0.015	2	2
Boron	mg/l	BDL (0.20)	BDL (0.20)	none	NA
Calcium	mg/l	34.0	42.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	0.023	0.031	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	2.3	2.8	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	1.9	1.9	none	NA
Selenium	mg/l	0.010	0.026	0.05	1,2
Sodium	mg/l	660	760	none	NA
Strontium	mg/l	1.3	1.7	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Sample ID: GUTH1WW  
 Landowner: Tim Guthrie  
 Date of Sampling: 07/05/12 and 09/10/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/05/12	09/10/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	75.0	74.0	250	1,2
Fluoride	mg/l	0.47	0.46	4	2
Sulfate	mg/l	1200	1500	250	1,2
Alkalinity	mg/l	450	450	none	NA
Alkalinity, Bicarbonate	mg/l	450	450	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	7.3	7.5	6.5-8.5	2
Specific Conductance	umhos/cm	3000	3000	none	NA
Dissolved Solids*	mg/l	2700	2600	500	2
Arsenic	mg/l	BDL (0.0010)	0.0015	0.01	1,2
Barium	mg/l	0.013	0.012	2	2
Boron	mg/l	0.29	0.37	none	NA
Calcium	mg/l	280	270	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	0.035	BDL (0.020)	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	160	170	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	6.2	6.6	none	NA
Selenium	mg/l	0.0084	0.0072	0.05	1,2
Sodium	mg/l	260	250	none	NA
Strontium	mg/l	6.5	6.4	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Sample ID: BELL1WW  
 Landowner: Tim Melton  
 Date of Sampling: 07/05/12 and 09/05/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/05/12	09/05/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	35.0	34.0	250	1,2
Fluoride	mg/l	1.1	1.2	4	2
Sulfate	mg/l	550	510	250	1,2
Alkalinity	mg/l	590	580	none	NA
Alkalinity, Bicarbonate	mg/l	590	580	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	7.7	7.7	6.5-8.5	2
Specific Conductance	umhos/cm	2200	2300	none	NA
Dissolved Solids*	mg/l	1500	1400	500	2
Arsenic	mg/l	BDL (0.0010)	0.0027	0.01	1,2
Barium	mg/l	0.013	0.014	2	2
Boron	mg/l	0.32	0.38	none	NA
Calcium	mg/l	52.0	52.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	BDL (0.020)	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	22.0	23.0	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	3.2	3.2	none	NA
Selenium	mg/l	0.042	0.035	0.05	1,2
Sodium	mg/l	440	440	none	NA
Strontium	mg/l	2.3	2.4	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)



Sample ID: BELL2WW  
 Landowner: Tim Melton  
 Date of Sampling: 07/05/12 and 09/05/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/05/12	09/05/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	200	190	250	1,2
Fluoride	mg/l	1.2	1.2	4	2
Sulfate	mg/l	1000	1000	250	1,2
Alkalinity	mg/l	510	510	none	NA
Alkalinity, Bicarbonate	mg/l	510	510	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	7.9	7.9	6.5-8.5	2
Specific Conductance	umhos/cm	3400	2700	none	NA
Dissolved Solids*	mg/l	2400	2400	500	2
Arsenic	mg/l	0.011	0.018	0.01	1,2
Barium	mg/l	0.025	0.022	2	2
Boron	mg/l	0.41	0.47	none	NA
Calcium	mg/l	72.0	73.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	BDL (0.020)	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	32.0	31.0	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	4.5	4.4	none	NA
Selenium	mg/l	0.45	0.44	0.05	1,2
Sodium	mg/l	690	720	none	NA
Strontium	mg/l	3.2	3.5	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Sample ID: ESGA1WW  
 Landowner: Dwight Esgar  
 Date of Sampling: 07/13/12 and 09/05/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/13/12	09/05/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	64.0	64.0	250	1,2
Fluoride	mg/l	1.5	1.5	4	2
Sulfate	mg/l	260	300	250	1,2
Alkalinity	mg/l	620	560	none	NA
Alkalinity, Bicarbonate	mg/l	620	560	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	7.5	7.4	6.5-8.5	2
Specific Conductance	umhos/cm	1600	1900	none	NA
Dissolved Solids*	mg/l	1100	1100	500	2
Arsenic	mg/l	0.0092	0.0040	0.01	1,2
Barium	mg/l	0.090	0.096	2	2
Boron	mg/l	BDL (0.20)	BDL (0.20)	none	NA
Calcium	mg/l	76.0	86.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	BDL (0.020)	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	46.0	53.0	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	1.8	1.8	none	NA
Selenium	mg/l	0.016	0.017	0.05	1,2
Sodium	mg/l	240	270	none	NA
Strontium	mg/l	2.7	3.1	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Sample ID: SCH11R

Landowner: Thomas Schickling

Date of Sampling: 06/18/12, 07/05/12 and 09/05/12

Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	06/18/12	07/05/12	09/05/12	Level	Standard
Bromide	mg/l	NT	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	540	22.0	19.0	250	1,2
Fluoride	mg/l	NT	1.9	1.6	4	2
Sulfate	mg/l	120	120	85.0	250	1,2
Alkalinity	mg/l	NT	640	610	none	NA
Alkalinity, Bicarbonate	mg/l	NT	580	590	none	NA
Alkalinity, Carbonate	mg/l	NT	52.0	20.0	none	NA
Methane	mg/l	NT	0.019	0.017	none	NA
Ethane	mg/l	NT	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	NT	BDL (0.013)	BDL (0.013)	none	NA
pH	su	NT	8.7	8.5	6.5-8.5	2
Specific Conductance	umhos/cm	NT	1400	1400	none	NA
Dissolved Solids*	mg/l	1800	910	800	500	2
Arsenic	mg/l	NT	0.0027	0.0032	0.01	1,2
Barium	mg/l	NT	0.098	0.11	2	2
Boron	mg/l	NT	0.35	0.31	none	NA
Calcium	mg/l	NT	38.0	44.0	none	NA
Chromium	mg/l	NT	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	NT	BDL (0.020)	BDL (0.020)	1.0	1,2
Iron	mg/l	NT	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	NT	42.0	45.0	none	NA
Manganese	mg/l	NT	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	NT	1.6	1.5	none	NA
Selenium	mg/l	NT	0.0088	0.0060	0.05	1,2
Sodium	mg/l	NT	260	220	none	NA
Strontium	mg/l	NT	1.3	1.5	none	NA
Benzene	mg/l	0.0051	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	0.014	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	0.015	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NT-not tested

NA-non applicable

\*none\*. The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Sample ID: SCHE1WW  
 Landowner: Greg Schelling  
 Date of Sampling: 07/05/12 and 09/05/12  
 Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/05/12	09/05/12	Level	Standard
Bromide	mg/l	BDL (1.0)	BDL (1.0)	none	NA
Chloride	mg/l	28.0	58.0	250	1,2
Fluoride	mg/l	2.1	1.5	4	2
Sulfate	mg/l	150	240	250	1,2
Alkalinity	mg/l	540	440	none	NA
Alkalinity, Bicarbonate	mg/l	540	440	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	BDL (20.0)	none	NA
Methane	mg/l	BDL (0.010)	BDL (0.010)	none	NA
Ethane	mg/l	BDL (0.013)	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	BDL (0.013)	none	NA
pH	su	7.7	7.8	6.5-8.5	2
Specific Conductance	umhos/cm	1300	1600	none	NA
Dissolved Solids*	mg/l	820	940	500	2
Arsenic	mg/l	0.0020	0.0030	0.01	1,2
Barium	mg/l	0.062	0.059	2	2
Boron	mg/l	0.26	0.25	none	NA
Calcium	mg/l	50.0	52.0	none	NA
Chromium	mg/l	BDL (0.010)	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	0.026	1.0	1,2
Iron	mg/l	BDL (0.10)	BDL (0.10)	0.3	1,2
Magnesium	mg/l	51.0	38.0	none	NA
Manganese	mg/l	BDL (0.010)	BDL (0.010)	0.05	1,2
Potassium	mg/l	1.9	2.8	none	NA
Selenium	mg/l	0.017	0.045	0.05	1,2
Sodium	mg/l	190	230	none	NA
Strontium	mg/l	2.2	1.9	none	NA
Benzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.005	1,2
Toluene	mg/l	BDL (0.0050)	BDL (0.0050)	1.0	1
Ethylbenzene	mg/l	BDL (0.0010)	BDL (0.0010)	0.7	1
Xylenes (Total)	mg/l	BDL (0.0030)	BDL (0.0030)	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)



Sample ID: HUNTERNOP

Facility: Hunter Mesa Water Treatment Facility North Pond

Date of Sampling: 07/13/12

Samples Collected By: Aaron (Olsson Associates)

Test Parameter	Units	07/13/12	Level	Standard
Bromide	mg/l	21.0	none	NA
Chloride	mg/l	3700	250	1,2
Fluoride	mg/l	BDL (0.10)	4	2
Sulfate	mg/l	39.0	250	1,2
Alkalinity	mg/l	1300	none	NA
Alkalinity, Bicarbonate	mg/l	1300	none	NA
Alkalinity, Carbonate	mg/l	BDL (20.0)	none	NA
Methane	mg/l	0.65	none	NA
Ethane	mg/l	BDL (0.013)	none	NA
Ethene	mg/l	BDL (0.013)	none	NA
pH	su	7.8	6.5-8.5	2
Specific Conductance	umhos/cm	14000	none	NA
Dissolved Solids*	mg/l	8000	500	2
Arsenic	mg/l	0.14	0.01	1,2
Barium	mg/l	24.0	2	2
Boron	mg/l	6.9	none	NA
Calcium	mg/l	150	none	NA
Chromium	mg/l	BDL (0.010)	0.1	2
Copper	mg/l	BDL (0.020)	1.0	1,2
Iron	mg/l	0.34	0.3	1,2
Magnesium	mg/l	14.0	none	NA
Manganese	mg/l	0.15	0.05	1,2
Potassium	mg/l	32.0	none	NA
Selenium	mg/l	0.027	0.05	1,2
Sodium	mg/l	2800	none	NA
Strontium	mg/l	24.0	none	NA
Benzene	mg/l	1.3	0.005	1,2
Toluene	mg/l	3.3	1.0	1
Ethylbenzene	mg/l	0.12	0.7	1
Xylenes (Total)	mg/l	2.4	10.0	1

mg/L-milligrams per liter

umhos/cm-micromhos per centimeter

su-standard units

pH-parts of hydrogen

BDL-below detection limit

NA-non applicable

\*none\*-The CDPHE has not established water quality standards for these constituents.

\*Federal Secondary Drinking Water Regulation: non-enforceable guidelines for parameters based on cosmetic or aesthetic effects.

Standard 1 = Colorado Department of Public Health and Environment Basic Standards for Surface Water (5 CCR 1002-31)

Standard 2 = Colorado Department of Public Health and Environment Basic Standards for Ground Water (5 CCR 1002-41)

Location Guthrie PropertyDate 07/05/12

43

Project / Client \_\_\_\_\_

Guthrie-070512

Time: 1200

Temp 17.00

Cond 296

DO% 38.0

pH 6.61

Turb 10.0

TDS 1.90

ORP 85

DO 3.53

Sal 1.5

Note: Rugged for about 5 min. at about 3 gpm.

WQ - Effervescence, white color, no sediment,  
no particulate

Location MELTAN PropertyDate 07/05/12

41

Project / Client \_\_\_\_\_

MELTUSW-070512 <sup>(BELLGIRW)</sup>

Time: 1000

Temp 12.99	Cond 2.20	DO% 53.9
pH 6.76	Turb 0.0	TDS 1.41
ORP 160	DO 5.46	Sal 1.1

Note: Took sample from yard hydrant south of residence. Oil containers around hydrant area. Purged into bucket for about 5 min at about 3 gpm. WQ - No sediment, neutral odor, no efflu., no particulates, clear color.

MELTIRWW-070512 <sup>(MELT2WW)</sup>

Time: 1040

DTW: 43.68'	DTB: >100'	
Temp 12.11°C	Cond 3.32	DO% 55.0
pH 7.27	Turb 9.1	TDS 2.13, 1.6
ORP 164	DO 5.44	Sal 1.7 ppt

Note: Hand bailed well with baler and bailed 3 buckets (5 gal). WQ - No sediment, neutral odor, no efflu., no particulates, clear. Sample taken from well in field north of the residence.

Location Melton Property Date 09/05/12Project / Client FDE Pdy Release

BELLWELL-090512

Time: 1110

Temp 13.20 Cond 0.18 DO% 53.4

pH 7.31 Turb 6.3 TDS 1.4

ORP 101 DO 5.39 Sal 1.1

Note: Ditch next to MELTON well is running.

BELLWELL-090512

Time: 1130

Temp 12.84 Cond 3.30 DO% 69.8

pH 7.49 Turb 3.9 TDS 2.11

ORP 109 DO 6.99 Sal 1.7

Note: DTW - 42.72' Clear, no odor



Location SCHILLING PROPERTY Date 07/05/12

Project / Client \_\_\_\_\_

SCHEWW-070512 (SCHEWW)

Time: 1120

Temp	13.30	Cond	1.32	DH	95.8
pH	6.88	Turb	0.0	TDS	845
ORP	186	DO	9.68	Sal	0.7

Note: Clear, no odors, no sediment,  
no effervescence, no particulates observed

Location Schelling PropertyDate 09/05/12

59

Project / Client FIRE Poly Release Follow-up

SITE 1 W-090512

Time: 1050

Temp 13.55 Cond 1.40

DO% 106

pH 7.39 Turb 25.7

TDS 896

Orp 97 DO 10.65

Sal 0.7

Note: Some bubbles noted, new pump installed since last sampling event, low water flow. Yellow tint. Small particulates.

Location Guthrie Property Date 09/10/12

Project / Client FIZE Poly Release

7 Guthrie-09/012

Time: 1000

Temp 16.40

Cond 2.99

Do the 41.7

DN 7.10

Турбо 10Н

TDS 1.92

OP 29

DO 5.79

Scal 1.6

Note. WQ - Clear, neutral odor, no sheen.

Location Schickling PropertyDate 07/05/12

Project / Client \_\_\_\_\_

SCH11R-070512

Time: 1230

Temp 31.06

Cond 1.42

DO% 101.0

pH 8.00

Turb 7.0

TDS 0.906

ORP 1.28

DO 9.71

Sal 0.7

Note: Ditch water into cistern (open to air). Veg.  
and micro-invertebrates in water. ~~Used for~~



Location Schickling PropertyDate 09/05/12

57

Project / Client FIRE Poly Release Follow-up

SCH11IR-090512

Time: 0915

Temp 16.15

Cond 1.25

DO% 65.4

pH 7.81

Turb 7.7

TDS 0.798

ORP 90

DO 6.22

Sal 0.6

Note: Ditch next to irrigation cistern is not  
flowing and empty.

Location SCHULTZ ~~1117~~ Property Date 07/13/12 45  
Project / Client FIZE Poly Release

SCHULWW-071312

Time: 1020

Temp 18.29 Cond 2.99 DO<sub>2</sub> 55.5

pH 7.74 Turb 0.0 TDS 1.92

ORP 139 DO 5.04 Sal 1.6

Note: Sampled from valve in the basement  
water well. Davis ditch adds to well. WQ -  
Clear, no odor, no efflu, no sed, no particulates,  
no sheen

58

Location Schultz Property Date 09/05/12Project / Client FIRE Pkly Release Follow-up

SCHULZW-090512

Time: 1000

Temp 16.32 Cond 3.36 DO% 105.3

pH 7.83 Turb 5.1 TDS 2.15

ORP 110 DO 9.75 Sal 1.8

Note: Clear, neutral odor, no efflu. Taken from  
hose connected to cistern (owner hose). Mr. Schultz  
was present.

46

Location Esgar PropertyDate 07/13/12Project / Client FIRE Poly Release

ESGA.1WW - 07/13/12

Time: 1055

Temp 21.62

Cond 1.61

DO 4.66

pH 7.02

Turb 17.0

TDS 1.03

ORP 180

DO 4.66

Sal 0.8

Notes: Took sample from yard hydrant north of workshop. WQ - Clear, no sediment, no particulates, neutral odor, no efflu, no sheen.



Location: Esgar Property

Date: 09/05/12

61

Project/Client: FIRE Poly Release

ESGA2WW-070512

Time: 12:15

Temp 20.00 Cond 1.62

DOR 39.8

pH 7.20 Turb 10.4

TDS 1.04

ORP 126 DO 3.51

Sal 0.8

Note: Clear, no odor



Location Denelson Property

Date 07/13/12 <sup>47</sup>

Project / Client FIRE Poly Release

LLOMWS-071312

Time: 1140

Temp 16.14

Cond 3.61

DOB 36.2

pH 7.46

Turb 7.4

TDS 2.31

ORP 125

DO 3.43

Sal 1.9

Note: Took sample from inside pump house on first container. Yard hydrant outside pump house not functioning. WQ - Clear, cloudy with bubbles, effervescent, neutral odor, no sed., no particulates, no shoen.

61 62

### Lloyd Property

Date \_\_\_\_\_

9/5/12

F12E Pol + release

Z 110yd2wn -090512

Time: 1245

Temp 10.32 Cond 3.62 DO% 52.0

pH 7.60 Turb 8.9 TOS 2.32

Orp 116 DO 4.9 SAL 1.9

clear, no odors

*i*

Location

Date \_\_\_\_\_

63

Project / Client

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

## Report Summary

Tuesday June 26, 2012

Report Number: L581023


Samples Received: 06/19/12

Client Project:

Description: F12E Pipeline Spill

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill  
Sample ID : F12E PIPELINE SPILL-SOIL 1  
Collected By : C. Jensen  
Collection Date : 06/18/12 11:00

ESC Sample # : L581023-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/22/12	1
Chromium, Trivalent	11.	2.0	mg/kg	Calc.	06/20/12	1
ORP	100		mV	2580	06/20/12	1
pH	8.8		su	9045D	06/22/12	1
Sodium Adsorption Ratio	10.			Calc.	06/22/12	1
Specific Conductance	2100		umhos/cm	9050AMod	06/21/12	1
Mercury	BDL	0.020	mg/kg	7471	06/20/12	1
Arsenic	3.0	1.0	mg/kg	6010B	06/20/12	1
Barium	220	0.25	mg/kg	6010B	06/20/12	1
Cadmium	BDL	0.25	mg/kg	6010B	06/20/12	1
Chromium	11.	0.50	mg/kg	6010B	06/20/12	1
Copper	8.9	1.0	mg/kg	6010B	06/20/12	1
Lead	8.0	0.25	mg/kg	6010B	06/20/12	1
Nickel	13.	1.0	mg/kg	6010B	06/20/12	1
Selenium	BDL	1.0	mg/kg	6010B	06/20/12	1
Silver	BDL	0.50	mg/kg	6010B	06/20/12	1
Zinc	39.	1.5	mg/kg	6010B	06/20/12	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/20/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	101.		% Rec.	602/8015	06/20/12	5
Benzene	BDL	0.0050	mg/kg	8260B	06/20/12	5
Toluene	BDL	0.025	mg/kg	8260B	06/20/12	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/20/12	5
Total Xylenes	BDL	0.015	mg/kg	8260B	06/20/12	5
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	06/20/12	5
Dibromofluoromethane	97.1		% Rec.	8260B	06/20/12	5
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	06/20/12	5
4-Bromofluorobenzene	110.		% Rec.	8260B	06/20/12	5
TPH (GC/FID) High Fraction	4.1	4.0	mg/kg	3546/DRO	06/22/12	1
Surrogate recovery(%) o-Terphenyl	62.6		% Rec.	3546/DRO	06/22/12	1

Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L581023-01 (PH) - 8.8@21.4c



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# REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill  
Sample ID : F12E PIPELINE SPILL-SOIL 1  
Collected By : C. Jensen  
Collection Date : 06/18/12 11:00

ESC Sample # : L581023-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	06/20/12	1
Surrogate Recovery						
Nitrobenzene-d5	64.0		% Rec.	8270C-SIM	06/20/12	1
2-Fluorobiphenyl	75.9		% Rec.	8270C-SIM	06/20/12	1
p-Terphenyl-d14	91.1		% Rec.	8270C-SIM	06/20/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L581023-01 (PH) - 8.8@21.4c

REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill  
Sample ID : F12E PIPELINE SPILL-SOIL 2  
Collected By : C. Jensen  
Collection Date : 06/18/12 11:25

ESC Sample # : L581023-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	4.0	mg/kg	3060A/7196A	06/22/12	2
Chromium, Trivalent	15.	4.0	mg/kg	Calc.	06/21/12	1
ORP	210		mV	2580	06/22/12	1
pH	8.0		su	9045D	06/23/12	1
Sodium Adsorption Ratio	14.			Calc.	06/23/12	1
Specific Conductance	1900		umhos/cm	9050AMod	06/21/12	1
Mercury	BDL	0.020	mg/kg	7471	06/20/12	1
Arsenic	3.5	1.0	mg/kg	6010B	06/21/12	1
Barium	200	0.25	mg/kg	6010B	06/21/12	1
Cadmium	BDL	0.25	mg/kg	6010B	06/21/12	1
Chromium	15.	0.50	mg/kg	6010B	06/21/12	1
Copper	12.	1.0	mg/kg	6010B	06/21/12	1
Lead	10.	0.25	mg/kg	6010B	06/21/12	1
Nickel	7.9	1.0	mg/kg	6010B	06/21/12	1
Selenium	BDL	1.0	mg/kg	6010B	06/21/12	1
Silver	BDL	0.50	mg/kg	6010B	06/21/12	1
Zinc	56.	1.5	mg/kg	6010B	06/21/12	1
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015D/GRO	06/20/12	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	100.		% Rec.	602/8015	06/20/12	5
Benzene	BDL	0.0050	mg/kg	8260B	06/20/12	5
Toluene	BDL	0.025	mg/kg	8260B	06/20/12	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	06/20/12	5
Total Xylenes	BDL	0.015	mg/kg	8260B	06/20/12	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	06/20/12	5
Dibromofluoromethane	99.3		% Rec.	8260B	06/20/12	5
a,a,a-Trifluorotoluene	106.		% Rec.	8260B	06/20/12	5
4-Bromofluorobenzene	110.		% Rec.	8260B	06/20/12	5
TPH (GC/FID) High Fraction	16.	4.0	mg/kg	3546/DRO	06/22/12	1
Surrogate recovery(%) o-Terphenyl	74.6		% Rec.	3546/DRO	06/22/12	1

Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L581023-02 (SV8270PAHSIM) - Dilution due to matrix  
L581023-02 (CR6) - diluted due to sample color interference  
L581023-02 (PH) - 8.0@20.5c



REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill  
Sample ID : F12E PIPELINE SPILL-SOIL 2  
Collected By : C. Jensen  
Collection Date : 06/18/12 11:25

ESC Sample # : L581023-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Acenaphthene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Acenaphthylene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Benzo(a)anthracene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Benzo(a)pyrene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Benzo(b)fluoranthene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Benzo(g,h,i)perylene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Benzo(k)fluoranthene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Chrysene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Dibenz(a,h)anthracene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Fluoranthene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Fluorene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Indeno(1,2,3-cd)pyrene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Naphthalene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Phenanthrene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Pyrene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
1-Methylnaphthalene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
2-Methylnaphthalene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
2-Chloronaphthalene	BDL	0.030	mg/kg	8270C-SIM	06/22/12	5
Surrogate Recovery						
Nitrobenzene-d5	61.4		% Rec.	8270C-SIM	06/22/12	5
2-Fluorobiphenyl	63.1		% Rec.	8270C-SIM	06/22/12	5
p-Terphenyl-d14	79.0		% Rec.	8270C-SIM	06/22/12	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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L581023-02 (SV8270PAHSIM) - Dilution due to matrix

L581023-02 (CR6) - diluted due to sample color interference

L581023-02 (PH) - 8.0@20.5c



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# REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill

Sample ID : F12E-PS-W1

Collected By : C. Jensen  
Collection Date : 06/18/12 11:30

ESC Sample # : L581023-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	23.	2.0	mg/l	9056	06/23/12	2
Sulfate	130	10.	mg/l	9056	06/23/12	2
Dissolved Solids	920	10.	mg/l	2540C	06/26/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/20/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/23/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/23/12	1
Surrogate Recovery						
Toluene-d8	95.9		% Rec.	8260B	06/20/12	1
Dibromofluoromethane	97.5		% Rec.	8260B	06/20/12	1
a,a,a-Trifluorotoluene	110.		% Rec.	8260B	06/20/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	06/20/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill

Sample ID : GUTHRIE DITCH

Collected By : C. Jensen  
Collection Date : 06/18/12 12:15

ESC Sample # : L581023-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	24.	2.0	mg/l	9056	06/23/12	2
Sulfate	130	10.	mg/l	9056	06/23/12	2
Dissolved Solids	960	10.	mg/l	2540C	06/26/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/20/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/20/12	1
Surrogate Recovery						
Toluene-d8	96.9		% Rec.	8260B	06/20/12	1
Dibromofluoromethane	97.8		% Rec.	8260B	06/20/12	1
a,a,a-Trifluorotoluene	111.		% Rec.	8260B	06/20/12	1
4-Bromofluorobenzene	110.		% Rec.	8260B	06/20/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill

Sample ID : SHIKLING CISTERN

Collected By : C. Jensen  
Collection Date : 06/18/12 12:45

ESC Sample # : L581023-05

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	540	10.	mg/l	9056	06/23/12	10
Sulfate	120	50.	mg/l	9056	06/23/12	10
Dissolved Solids	1800	10.	mg/l	2540C	06/26/12	1
Benzene	0.0051	0.0010	mg/l	8260B	06/20/12	1
Toluene	0.014	0.0050	mg/l	8260B	06/20/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Total Xylenes	0.015	0.0030	mg/l	8260B	06/20/12	1
Surrogate Recovery						
Toluene-d8	96.1		% Rec.	8260B	06/20/12	1
Dibromofluoromethane	95.6		% Rec.	8260B	06/20/12	1
a,a,a-Trifluorotoluene	109.		% Rec.	8260B	06/20/12	1
4-Bromofluorobenzene	113.		% Rec.	8260B	06/20/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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# REPORT OF ANALYSIS

Charlie Jensen  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

June 26, 2012

Date Received : June 19, 2012  
Description : F12E Pipeline Spill  
Sample ID : 5500 CTY RD 331 CREEK  
Collected By : C. Jensen  
Collection Date : 06/18/12 13:10

ESC Sample # : L581023-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	29.	5.0	mg/l	9056	06/23/12	5
Sulfate	130	25.	mg/l	9056	06/23/12	5
Dissolved Solids	920	10.	mg/l	2540C	06/26/12	1
Benzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Toluene	BDL	0.0050	mg/l	8260B	06/20/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	06/20/12	1
Total Xylenes	BDL	0.0030	mg/l	8260B	06/20/12	1
Surrogate Recovery						
Toluene-d8	96.4		% Rec.	8260B	06/20/12	1
Dibromofluoromethane	97.2		% Rec.	8260B	06/20/12	1
a,a,a-Trifluorotoluene	110.		% Rec.	8260B	06/20/12	1
4-Bromofluorobenzene	107.		% Rec.	8260B	06/20/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L581023-01	WG598710	SAMP	Lead	R2220354	B
	WG598728	SAMP	ORP	R2220801	T8
L581023-02	WG598781	SAMP	Anthracene	R2223393	O
	WG598781	SAMP	Acenaphthene	R2223393	O
	WG598781	SAMP	Acenaphthylene	R2223393	O
	WG598781	SAMP	Benzo(a)anthracene	R2223393	O
	WG598781	SAMP	Benzo(a)pyrene	R2223393	O
	WG598781	SAMP	Benzo(b)fluoranthene	R2223393	O
	WG598781	SAMP	Benzo(g,h,i)perylene	R2223393	O
	WG598781	SAMP	Benzo(k)fluoranthene	R2223393	O
	WG598781	SAMP	Chrysene	R2223393	O
	WG598781	SAMP	Dibenz(a,h)anthracene	R2223393	O
	WG598781	SAMP	Fluoranthene	R2223393	O
	WG598781	SAMP	Fluorene	R2223393	O
	WG598781	SAMP	Indeno(1,2,3-cd)pyrene	R2223393	O
	WG598781	SAMP	Naphthalene	R2223393	O
	WG598781	SAMP	Phenanthrene	R2223393	O
	WG598781	SAMP	Pyrene	R2223393	O
	WG598781	SAMP	1-Methylnaphthalene	R2223393	O
	WG598781	SAMP	2-Methylnaphthalene	R2223393	O
	WG598781	SAMP	2-Chloronaphthalene	R2223393	O
	WG598467	SAMP	Chromium, Hexavalent	R2223515	O

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
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  
06/26/12 at 16:50:46

TSR Signing Reports: 358  
R5 - Desired TAT

Try not to report benzene as BDL above a 250x dilution. ONLY log soil samples under this account. Waters get logged under ENCRCO. Log all PAHs as PAHSIM.

Sample: L581023-01 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50

Sample: L581023-02 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50

Sample: L581023-03 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50

Sample: L581023-04 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50

Sample: L581023-05 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50

Sample: L581023-06 Account: ENCANACO Received: 06/19/12 09:00 Due Date: 06/26/12 00:00 RPT Date: 06/26/12 16:50



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Charlie Jensen  
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Parachute, CO 81635

Quality Assurance Report  
Level II

L581023

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 26, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/kg			WG598789	06/20/12 05:18
Ethylbenzene	< .001	mg/kg			WG598789	06/20/12 05:18
Toluene	< .005	mg/kg			WG598789	06/20/12 05:18
Total Xylenes	< .003	mg/kg			WG598789	06/20/12 05:18
4-Bromofluorobenzene		% Rec.	109.1	67-133	WG598789	06/20/12 05:18
Dibromofluoromethane		% Rec.	98.03	72-135	WG598789	06/20/12 05:18
Toluene-d8		% Rec.	102.4	90-113	WG598789	06/20/12 05:18
a,a,a-Trifluorotoluene		% Rec.	105.8	89-115	WG598789	06/20/12 05:18
1-Methylnaphthalene	< .006	mg/kg			WG598704	06/20/12 09:44
2-Chloronaphthalene	< .006	mg/kg			WG598704	06/20/12 09:44
2-Methylnaphthalene	< .006	mg/kg			WG598704	06/20/12 09:44
Acenaphthene	< .006	mg/kg			WG598704	06/20/12 09:44
Acenaphthylene	< .006	mg/kg			WG598704	06/20/12 09:44
Anthracene	< .006	mg/kg			WG598704	06/20/12 09:44
Benzo(a)anthracene	< .006	mg/kg			WG598704	06/20/12 09:44
Benzo(a)pyrene	< .006	mg/kg			WG598704	06/20/12 09:44
Benzo(b)fluoranthene	< .006	mg/kg			WG598704	06/20/12 09:44
Benzo(g,h,i)perylene	< .006	mg/kg			WG598704	06/20/12 09:44
Benzo(k)fluoranthene	< .006	mg/kg			WG598704	06/20/12 09:44
Chrysene	< .006	mg/kg			WG598704	06/20/12 09:44
Dibenz(a,h)anthracene	< .006	mg/kg			WG598704	06/20/12 09:44
Fluoranthene	< .006	mg/kg			WG598704	06/20/12 09:44
Fluorene	< .006	mg/kg			WG598704	06/20/12 09:44
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG598704	06/20/12 09:44
Naphthalene	< .006	mg/kg			WG598704	06/20/12 09:44
Phenanthrene	< .006	mg/kg			WG598704	06/20/12 09:44
Pyrene	< .006	mg/kg			WG598704	06/20/12 09:44
2-Fluorobiphenyl		% Rec.	84.30	34-129	WG598704	06/20/12 09:44
Nitrobenzene-d5		% Rec.	85.56	14-141	WG598704	06/20/12 09:44
p-Terphenyl-d14		% Rec.	117.2	25-139	WG598704	06/20/12 09:44
Mercury	< .02	mg/kg			WG598751	06/20/12 08:44
Mercury	< .02	mg/kg			WG598752	06/20/12 10:06
Arsenic	< 1	mg/kg			WG598710	06/20/12 13:59
Barium	< .25	mg/kg			WG598710	06/20/12 13:59
Cadmium	< .25	mg/kg			WG598710	06/20/12 13:59
Chromium	< .5	mg/kg			WG598710	06/20/12 13:59
Copper	< 1	mg/kg			WG598710	06/20/12 13:59
Lead	< .25	mg/kg			WG598710	06/20/12 13:59
Nickel	< 1	mg/kg			WG598710	06/20/12 13:59
Selenium	< 1	mg/kg			WG598710	06/20/12 13:59
Silver	< .5	mg/kg			WG598710	06/20/12 13:59
Zinc	< 1.5	mg/kg			WG598710	06/20/12 13:59
Specific Conductance	1.02	umhos/cm			WG598763	06/21/12 08:18
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG598772	06/19/12 21:52
a,a,a-Trifluorotoluene(FID)		% Rec.	100.7	59-128	WG598772	06/19/12 21:52

\* Performance of this Analyte is outside of established criteria.  
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Tax I.D. 62-0814289

Est. 1970

June 26, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .001	mg/l			WG598738	06/20/12 00:15
Ethylbenzene	< .001	mg/l			WG598738	06/20/12 00:15
Toluene	< .005	mg/l			WG598738	06/20/12 00:15
Total Xylenes	< .003	mg/l			WG598738	06/20/12 00:15
4-Bromofluorobenzene		% Rec.	108.7	82-120	WG598738	06/20/12 00:15
Dibromofluoromethane		% Rec.	96.19	82-126	WG598738	06/20/12 00:15
Toluene-d8		% Rec.	97.38	92-112	WG598738	06/20/12 00:15
a,a,a-Trifluorotoluene		% Rec.	109.3	90-116	WG598738	06/20/12 00:15
Arsenic	< 1	mg/kg			WG598850	06/21/12 14:34
Barium	< .25	mg/kg			WG598850	06/21/12 14:34
Cadmium	< .25	mg/kg			WG598850	06/21/12 14:34
Chromium	< .5	mg/kg			WG598850	06/21/12 14:34
Copper	< 1	mg/kg			WG598850	06/21/12 14:34
Lead	< .25	mg/kg			WG598850	06/21/12 14:34
Nickel	< 1	mg/kg			WG598850	06/21/12 14:34
Selenium	< 1	mg/kg			WG598850	06/21/12 14:34
Silver	< .5	mg/kg			WG598850	06/21/12 14:34
Zinc	< 1.5	mg/kg			WG598850	06/21/12 14:34
TPH (GC/FID) High Fraction	< 4	ppm			WG598785	06/22/12 09:19
o-Terphenyl		% Rec.	78.78	50-150	WG598785	06/22/12 09:19
1-Methylnaphthalene	< .006	mg/kg			WG598781	06/21/12 12:42
2-Chloronaphthalene	< .006	mg/kg			WG598781	06/21/12 12:42
2-Methylnaphthalene	< .006	mg/kg			WG598781	06/21/12 12:42
Acenaphthene	< .006	mg/kg			WG598781	06/21/12 12:42
Acenaphthylene	< .006	mg/kg			WG598781	06/21/12 12:42
Anthracene	< .006	mg/kg			WG598781	06/21/12 12:42
Benzo(a)anthracene	< .006	mg/kg			WG598781	06/21/12 12:42
Benzo(a)pyrene	< .006	mg/kg			WG598781	06/21/12 12:42
Benzo(b)fluoranthene	< .006	mg/kg			WG598781	06/21/12 12:42
Benzo(g,h,i)perylene	< .006	mg/kg			WG598781	06/21/12 12:42
Benzo(k)fluoranthene	< .006	mg/kg			WG598781	06/21/12 12:42
Chrysene	< .006	mg/kg			WG598781	06/21/12 12:42
Dibenz(a,h)anthracene	< .006	mg/kg			WG598781	06/21/12 12:42
Fluoranthene	< .006	mg/kg			WG598781	06/21/12 12:42
Fluorene	< .006	mg/kg			WG598781	06/21/12 12:42
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG598781	06/21/12 12:42
Naphthalene	< .006	mg/kg			WG598781	06/21/12 12:42
Phenanthrene	< .006	mg/kg			WG598781	06/21/12 12:42
Pyrene	< .006	mg/kg			WG598781	06/21/12 12:42
2-Fluorobiphenyl		% Rec.	72.08	34-129	WG598781	06/21/12 12:42
Nitrobenzene-d5		% Rec.	61.70	14-141	WG598781	06/21/12 12:42
p-Terphenyl-d14		% Rec.	100.6	25-139	WG598781	06/21/12 12:42
Chromium, Hexavalent	< 2	mg/kg			WG598467	06/22/12 15:04
pH	5.81	su			WG599187	06/22/12 14:15
pH	5.03	su			WG599344	06/23/12 11:35

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Level II

L581023

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Tax I.D. 62-0814289

Est. 1970

June 26, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethylbenzene	< .001	mg/l			WG599371	06/23/12 09:32
Total Xylenes	< .003	mg/l			WG599371	06/23/12 09:32
4-Bromofluorobenzene		% Rec.	100.7	82-120	WG599371	06/23/12 09:32
Dibromofluoromethane		% Rec.	98.51	82-126	WG599371	06/23/12 09:32
Toluene-d8		% Rec.	98.68	92-112	WG599371	06/23/12 09:32
a,a,a-Trifluorotoluene		% Rec.	100.2	90-116	WG599371	06/23/12 09:32
Chloride	< 1	mg/l			WG599421	06/23/12 06:15
Sulfate	< 5	mg/l			WG599421	06/23/12 06:15
Chloride	< 1	mg/l			WG599425	06/23/12 06:13
Sulfate	< 5	mg/l			WG599425	06/23/12 06:13
Dissolved Solids	< 10	mg/l			WG599287	06/26/12 11:15

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Mercury	mg/kg	0	0	0	20	L581023-01	WG598751
Mercury	mg/kg	0	0	0	20	L581023-02	WG598752
Arsenic	mg/kg	2.70	2.90	6.04	20	L580580-13	WG598710
Barium	mg/kg	99.0	96.5	2.66	20	L580580-13	WG598710
Cadmium	mg/kg	0.370	0.345	8.07	20	L580580-13	WG598710
Chromium	mg/kg	8.20	8.76	6.24	20	L580580-13	WG598710
Copper	mg/kg	17.0	17.0	1.75	20	L580580-13	WG598710
Lead	mg/kg	110.	132.	20.0	20	L580580-13	WG598710
Nickel	mg/kg	9.10	10.1	10.2	20	L580580-13	WG598710
Selenium	mg/kg	0	0	0	20	L580580-13	WG598710
Silver	mg/kg	0	0.133	NA	20	L580580-13	WG598710
Zinc	mg/kg	260.	258.	1.54	20	L580580-13	WG598710
Specific Conductance	umhos/cm	1800	1700	6.82	20	L580635-01	WG598763
Specific Conductance	umhos/cm	1900	1900	0	20	L581023-02	WG598763
ORP	mV	180.	180.	1.10	20	L580790-01	WG598728
ORP	mV	99.0	100.	1.01	20	L581023-01	WG598728
Arsenic	mg/kg	7.80	8.00	2.53	20	L580831-76	WG598850
Barium	mg/kg	66.0	63.0	4.80	20	L580831-76	WG598850
Cadmium	mg/kg	0	0	0	20	L580831-76	WG598850
Chromium	mg/kg	9.40	10.0	6.50	20	L580831-76	WG598850
Copper	mg/kg	22.0	22.1	0	20	L580831-76	WG598850
Lead	mg/kg	100.	62.0	50.6*	20	L580831-76	WG598850
Nickel	mg/kg	12.0	13.3	6.20	20	L580831-76	WG598850
Selenium	mg/kg	1.20	0	NA	20	L580831-76	WG598850
Silver	mg/kg	0	0	0	20	L580831-76	WG598850
Zinc	mg/kg	74.0	97.3	27.1*	20	L580831-76	WG598850

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Est. 1970

June 26, 2012

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chromium,Hexavalent	mg/kg	0	0	0	20		L580790-01	WG598467
Chromium,Hexavalent	mg/kg	0	0	0	20		L581114-02	WG598467
pH	su	9.10	9.00	1.43*	1		L580813-03	WG599187
pH	su	6.30	6.40	1.26*	1		L581471-03	WG599187
ORP	mV	180.	180.	0.557	20		L581114-01	WG599296
ORP	mV	0	0	0	20		L581508-07	WG599296
pH	su	9.40	9.40	0	1		L581412-02	WG599344
pH	su	7.30	7.30	0.137	1		L581554-01	WG599344
Chloride	mg/l	5.90	5.90	0.676	20		L580944-02	WG599421
Sulfate	mg/l	11.0	11.0	0.905	20		L580944-02	WG599421
Chloride	mg/l	1.50	1.50	0.669	20		L580944-05	WG599421
Sulfate	mg/l	8.60	8.50	1.29	20		L580944-05	WG599421
Sulfate	mg/l	5.40	5.50	2.21	20		L581505-01	WG599425
Sulfate	mg/l	0	0	0	20		L581505-05	WG599425
Dissolved Solids	mg/l	920.	917.	0.109	5		L581023-06	WG599287

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.025	0.0232	92.7	72-120	WG598789
Ethylbenzene	mg/kg	.025	0.0244	97.7	76-126	WG598789
Toluene	mg/kg	.025	0.0236	94.2	74-155	WG598789
Total Xylenes	mg/kg	.075	0.0741	98.9	76-126	WG598789
4-Bromofluorobenzene				106.2	67-133	WG598789
Dibromofluoromethane				99.46	72-135	WG598789
Toluene-d8				102.4	90-113	WG598789
a,a,a-Trifluorotoluene				106.8	89-115	WG598789
1-Methylnaphthalene	mg/kg	.033	0.0288	87.3	48-113	WG598704
2-Chloronaphthalene	mg/kg	.033	0.0273	82.7	51-114	WG598704
2-Methylnaphthalene	mg/kg	.033	0.0280	85.0	44-109	WG598704
Acenaphthene	mg/kg	.033	0.0277	83.9	52-108	WG598704
Acenaphthylene	mg/kg	.033	0.0284	86.2	51-110	WG598704
Anthracene	mg/kg	.033	0.0293	88.9	58-120	WG598704
Benzo(a)anthracene	mg/kg	.033	0.0309	93.8	54-110	WG598704
Benzo(a)pyrene	mg/kg	.033	0.0323	98.0	56-118	WG598704
Benzo(b)fluoranthene	mg/kg	.033	0.0330	100.	55-114	WG598704
Benzo(g,h,i)perylene	mg/kg	.033	0.0327	99.0	48-130	WG598704
Benzo(k)fluoranthene	mg/kg	.033	0.0331	100.	55-122	WG598704
Chrysene	mg/kg	.033	0.0334	101.	57-118	WG598704
Dibenz(a,h)anthracene	mg/kg	.033	0.0337	102.	53-122	WG598704
Fluoranthene	mg/kg	.033	0.0315	95.4	58-118	WG598704
Fluorene	mg/kg	.033	0.0300	91.0	54-109	WG598704
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0337	102.	51-125	WG598704
Naphthalene	mg/kg	.033	0.0263	79.8	45-105	WG598704
Phenanthrene	mg/kg	.033	0.0289	87.5	53-114	WG598704

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Pyrene	mg/kg	.033	0.0317	96.0	53-121	WG598704
2-Fluorobiphenyl				84.14	34-129	WG598704
Nitrobenzene-d5				86.31	14-141	WG598704
p-Terphenyl-d14				114.9	25-139	WG598704
Mercury	mg/kg	12.4	15.3	123.	71.6-128	WG598751
Mercury	mg/kg	12.4	13.8	111.	71.6-128	WG598752
Arsenic	mg/kg	237	227.	95.8	83.1-117	WG598710
Barium	mg/kg	252	249.	98.8	84.1-116	WG598710
Cadmium	mg/kg	191	189.	99.0	83.2-117	WG598710
Chromium	mg/kg	128	130.	102.	81.3-118	WG598710
Copper	mg/kg	123	124.	101.	83.7-116	WG598710
Lead	mg/kg	103	101.	98.1	83.1-117	WG598710
Nickel	mg/kg	118	122.	103.	82-118	WG598710
Selenium	mg/kg	110	106.	96.4	78.7-122	WG598710
Silver	mg/kg	47.3	45.2	95.6	66.2-134	WG598710
Zinc	mg/kg	183	179.	97.8	82-118	WG598710
Specific Conductance	umhos/cm	495	490.	99.0	85-115	WG598763
ORP	mV	228	226.	99.1	95.6-104.	WG598728
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.75	104.	67-135	WG598772
a,a,a-Trifluorotoluene(FID)				104.8	59-128	WG598772
Benzene	mg/l	.025	0.0220	88.1	72-119	WG598738
Ethylbenzene	mg/l	.025	0.0288	115.	77-124	WG598738
Toluene	mg/l	.025	0.0243	97.3	75-114	WG598738
Total Xylenes	mg/l	.075	0.0863	115.	77-123	WG598738
4-Bromofluorobenzene				108.2	82-120	WG598738
Dibromofluoromethane				97.02	82-126	WG598738
Toluene-d8				98.21	92-112	WG598738
a,a,a-Trifluorotoluene				109.4	90-116	WG598738
Arsenic	mg/kg	237	213.	89.9	83.1-117	WG598850
Barium	mg/kg	252	252.	100.	84.1-116	WG598850
Cadmium	mg/kg	191	182.	95.3	83.2-117	WG598850
Chromium	mg/kg	128	127.	99.2	81.3-118	WG598850
Copper	mg/kg	123	120.	97.6	83.7-116	WG598850
Lead	mg/kg	103	93.0	90.3	83.1-117	WG598850
Nickel	mg/kg	118	110.	93.2	82-118	WG598850
Selenium	mg/kg	110	97.9	89.0	78.7-122	WG598850
Silver	mg/kg	47.3	42.9	90.7	66.2-134	WG598850
Zinc	mg/kg	183	173.	94.5	82-118	WG598850
TPH (GC/FID) High Fraction	ppm	60	48.8	81.3	50-150	WG598785
o-Terphenyl				77.39	50-150	WG598785

\* Performance of this Analyte is outside of established criteria.

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Charlie Jensen  
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Quality Assurance Report  
Level II

L581023

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 26, 2012

Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch
		Known Val	Result	Result			
1-Methylnaphthalene	mg/kg	.033	0.0217		65.8	48-113	WG598781
2-Chloronaphthalene	mg/kg	.033	0.0235		71.1	51-114	WG598781
2-Methylnaphthalene	mg/kg	.033	0.0211		63.8	44-109	WG598781
Acenaphthene	mg/kg	.033	0.0246		74.6	52-108	WG598781
Acenaphthylene	mg/kg	.033	0.0252		76.5	51-110	WG598781
Anthracene	mg/kg	.033	0.0254		76.9	58-120	WG598781
Benzo(a)anthracene	mg/kg	.033	0.0212		64.2	54-110	WG598781
Benzo(a)pyrene	mg/kg	.033	0.0225		68.1	56-118	WG598781
Benzo(b)fluoranthene	mg/kg	.033	0.0215		65.1	55-114	WG598781
Benzo(g,h,i)perylene	mg/kg	.033	0.0218		66.0	48-130	WG598781
Benzo(k)fluoranthene	mg/kg	.033	0.0239		72.5	55-122	WG598781
Chrysene	mg/kg	.033	0.0224		67.8	57-118	WG598781
Dibenz(a,h)anthracene	mg/kg	.033	0.0225		68.1	53-122	WG598781
Fluoranthene	mg/kg	.033	0.0241		73.1	58-118	WG598781
Fluorene	mg/kg	.033	0.0231		70.0	54-109	WG598781
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0216		65.4	51-125	WG598781
Naphthalene	mg/kg	.033	0.0232		70.4	45-105	WG598781
Phenanthrene	mg/kg	.033	0.0247		74.9	53-114	WG598781
Pyrene	mg/kg	.033	0.0246		74.5	53-121	WG598781
2-Fluorobiphenyl					64.34	34-129	WG598781
Nitrobenzene-d5					57.23	14-141	WG598781
p-Terphenyl-d14					91.11	25-139	WG598781
Chromium, Hexavalent	mg/kg	150	138.		92.0	50-150	WG598467
pH	su	5.7	5.70		100.	98-101	WG599187
ORP	mV	228	226.		99.1	95.6-104.	WG599296
pH	su	5.7	5.73		101.	98-101	WG599344
Ethylbenzene	mg/l	.025	0.0250		100.	77-124	WG599371
Total Xylenes	mg/l	.075	0.0749		99.9	77-123	WG599371
4-Bromofluorobenzene					102.8	82-120	WG599371
Dibromofluoromethane					98.10	82-126	WG599371
Toluene-d8					101.2	92-112	WG599371
a,a,a-Trifluorotoluene					102.8	90-116	WG599371
Chloride	mg/l	40	40.0		100.	90-110	WG599421
Sulfate	mg/l	40	39.8		99.5	90-110	WG599421
Chloride	mg/l	40	40.5		101.	90-110	WG599425
Sulfate	mg/l	40	40.9		102.	90-110	WG599425
Dissolved Solids	mg/l	8800	8760		99.6	85-115	WG599287

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0234	0.0232	94.0	72-120	0.920	20	WG598789

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethylbenzene	mg/kg	0.0247	0.0244	99.0		76-126	1.05	20	WG598789
Toluene	mg/kg	0.0239	0.0236	95.0		74-155	1.25	20	WG598789
Total Xylenes	mg/kg	0.0748	0.0741	100.		76-126	0.890	20	WG598789
4-Bromofluorobenzene				107.6		67-133			WG598789
Dibromofluoromethane				99.79		72-135			WG598789
Toluene-d8				102.6		90-113			WG598789
a,a,a-Trifluorotoluene				106.4		89-115			WG598789
1-Methylnaphthalene	mg/kg	0.0261	0.0288	79.0		48-113	9.76	24	WG598704
2-Chloronaphthalene	mg/kg	0.0254	0.0273	77.0		51-114	7.23	24	WG598704
2-Methylnaphthalene	mg/kg	0.0267	0.0280	81.0		44-109	5.07	24	WG598704
Acenaphthene	mg/kg	0.0262	0.0277	79.0		52-108	5.52	22	WG598704
Acenaphthylene	mg/kg	0.0263	0.0284	80.0		51-110	7.70	21	WG598704
Anthracene	mg/kg	0.0292	0.0293	88.0		58-120	0.554	20	WG598704
Benzo(a)anthracene	mg/kg	0.0281	0.0309	85.0		54-110	9.79	22	WG598704
Benzo(a)pyrene	mg/kg	0.0301	0.0323	91.0		56-118	7.04	21	WG598704
Benzo(b)fluoranthene	mg/kg	0.0285	0.0330	86.0		55-114	14.8	20	WG598704
Benzo(g,h,i)perylene	mg/kg	0.0303	0.0327	92.0		48-130	7.72	20	WG598704
Benzo(k)fluoranthene	mg/kg	0.0323	0.0331	98.0		55-122	2.42	25	WG598704
Chrysene	mg/kg	0.0312	0.0334	94.0		57-118	6.64	20	WG598704
Dibenz(a,h)anthracene	mg/kg	0.0312	0.0337	94.0		53-122	7.51	20	WG598704
Fluoranthene	mg/kg	0.0294	0.0315	89.0		58-118	6.92	20	WG598704
Fluorene	mg/kg	0.0261	0.0300	79.0		54-109	14.0	20	WG598704
Indeno(1,2,3-cd)pyrene	mg/kg	0.0314	0.0337	95.0		51-125	7.22	21	WG598704
Naphthalene	mg/kg	0.0247	0.0263	75.0		45-105	6.55	24	WG598704
Phenanthrene	mg/kg	0.0279	0.0289	84.0		53-114	3.45	20	WG598704
Pyrene	mg/kg	0.0298	0.0317	90.0		53-121	6.02	20	WG598704
2-Fluorobiphenyl				79.76		34-129			WG598704
Nitrobenzene-d5				83.41		14-141			WG598704
p-Terphenyl-d14				105.5		25-139			WG598704
Specific Conductance	umhos/	490.	490.	99.0		85-115	0	20	WG598763
ORP	mV	226.	226.	99.0		95.6-104.	0	20	WG598728
TPH (GC/FID) Low Fraction	mg/kg	5.79	5.75	105.		67-135	0.700	20	WG598772
a,a,a-Trifluorotoluene(FID)				105.1		59-128			WG598772
Benzene	mg/l	0.0219	0.0220	88.0		72-119	0.660	20	WG598738
Ethylbenzene	mg/l	0.0285	0.0288	114.		77-124	1.09	20	WG598738
Toluene	mg/l	0.0235	0.0243	94.0		75-114	3.44	20	WG598738
Total Xylenes	mg/l	0.0854	0.0863	114.		77-123	1.02	20	WG598738
4-Bromofluorobenzene				110.5		82-120			WG598738
Dibromofluoromethane				98.89		82-126			WG598738
Toluene-d8				96.04		92-112			WG598738
a,a,a-Trifluorotoluene				106.1		90-116			WG598738
TPH (GC/FID) High Fraction	ppm	51.0	48.8	85.0		50-150	4.37	23	WG598785
o-Terphenyl				79.73		50-150			WG598785
1-Methylnaphthalene	mg/kg	0.0214	0.0217	65.0		48-113	1.58	24	WG598781
2-Chloronaphthalene	mg/kg	0.0234	0.0235	71.0		51-114	0.0901	24	WG598781

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
2-Methylnaphthalene	mg/kg	0.0209	0.0211	63.0	44-109	0.779	24	WG598781
Acenaphthene	mg/kg	0.0249	0.0246	76.0	52-108	1.39	22	WG598781
Acenaphthylene	mg/kg	0.0254	0.0252	77.0	51-110	0.732	21	WG598781
Anthracene	mg/kg	0.0251	0.0254	76.0	58-120	1.13	20	WG598781
Benzo(a)anthracene	mg/kg	0.0207	0.0212	63.0	54-110	2.26	22	WG598781
Benzo(a)pyrene	mg/kg	0.0218	0.0225	66.0	56-118	3.14	21	WG598781
Benzo(b)fluoranthene	mg/kg	0.0210	0.0215	64.0	55-114	2.24	20	WG598781
Benzo(g,h,i)perylene	mg/kg	0.0212	0.0218	64.0	48-130	2.52	20	WG598781
Benzo(k)fluoranthene	mg/kg	0.0232	0.0239	70.0	55-122	3.07	25	WG598781
Chrysene	mg/kg	0.0217	0.0224	66.0	57-118	2.92	20	WG598781
Dibenz(a,h)anthracene	mg/kg	0.0221	0.0225	67.0	53-122	1.71	20	WG598781
Fluoranthene	mg/kg	0.0236	0.0241	72.0	58-118	2.18	20	WG598781
Fluorene	mg/kg	0.0234	0.0231	71.0	54-109	1.47	20	WG598781
Indeno(1,2,3-cd)pyrene	mg/kg	0.0212	0.0216	64.0	51-125	1.99	21	WG598781
Naphthalene	mg/kg	0.0225	0.0232	68.0	45-105	3.03	24	WG598781
Phenanthrene	mg/kg	0.0245	0.0247	74.0	53-114	0.689	20	WG598781
Pyrene	mg/kg	0.0239	0.0246	72.0	53-121	2.82	20	WG598781
2-Fluorobiphenyl				65.16	34-129			WG598781
Nitrobenzene-d5				54.57	14-141			WG598781
p-Terphenyl-d14				88.06	25-139			WG598781
Chromium,Hexavalent	mg/kg	149.	138.	99.0	50-150	7.67	20	WG598467
pH	su	5.71	5.70	100.	98-101	0.175	20	WG599187
ORP	mV	226.	226.	99.0	95.6-104.	0	20	WG599296
pH	su	5.73	5.73	100.	98-101	0	20	WG599344
Ethylbenzene	mg/l	0.0239	0.0250	96.0	77-124	4.50	20	WG599371
Total Xylenes	mg/l	0.0734	0.0749	98.0	77-123	2.03	20	WG599371
4-Bromofluorobenzene				101.6	82-120			WG599371
Dibromofluoromethane				97.30	82-126			WG599371
Toluene-d8				101.8	92-112			WG599371
a,a,a-Trifluorotoluene				100.2	90-116			WG599371
Chloride	mg/l	40.0	40.0	100.	90-110	0	20	WG599421
Sulfate	mg/l	39.8	39.8	100.	90-110	0	20	WG599421
Chloride	mg/l	40.5	40.5	101.	90-110	0	20	WG599425
Sulfate	mg/l	40.9	40.9	102.	90-110	0	20	WG599425
Dissolved Solids	mg/l	8730	8760	99.0	85-115	0.366	20	WG599287

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.116	0	.025	92.8	44-131	L581032-01	WG598789
Ethylbenzene	mg/kg	0.123	0	.025	98.2	38-139	L581032-01	WG598789
Toluene	mg/kg	0.117	0	.025	93.8	43-127	L581032-01	WG598789
Total Xylenes	mg/kg	0.367	0	.075	98.0	38-137	L581032-01	WG598789

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
4-Bromofluorobenzene					107.0	67-133		
Dibromofluoromethane					101.1	72-135		
Toluene-d8					102.7	90-113		
a,a,a-Trifluorotoluene					106.3	89-115		
Mercury	mg/kg	0.247	0	.25	98.8	80-120	L581023-01	WG598751
Mercury	mg/kg	0.246	0	.25	98.4	80-120	L581023-02	WG598752
Arsenic	mg/kg	45.7	2.90	50	85.6	75-125	L580580-13	WG598710
Barium	mg/kg	146.	96.5	50	99.0	75-125	L580580-13	WG598710
Cadmium	mg/kg	45.9	0.345	50	91.1	75-125	L580580-13	WG598710
Chromium	mg/kg	57.1	8.76	50	96.7	75-125	L580580-13	WG598710
Copper	mg/kg	65.2	17.0	50	96.4	75-125	L580580-13	WG598710
Lead	mg/kg	161.	132.	50	58.0*	75-125	L580580-13	WG598710
Nickel	mg/kg	53.3	10.1	50	86.4	75-125	L580580-13	WG598710
Selenium	mg/kg	39.6	0	50	79.2	75-125	L580580-13	WG598710
Silver	mg/kg	44.9	0.133	50	89.5	75-125	L580580-13	WG598710
Zinc	mg/kg	326.	258.	50	136.*	75-125	L580580-13	WG598710
Arsenic	mg/kg	48.5	7.70	50	81.6	75-125	L580589-01	WG598710
Cadmium	mg/kg	43.5	1.30	50	84.4	75-125	L580589-01	WG598710
Chromium	mg/kg	135.	170.	50	0*	75-125	L580589-01	WG598710
Copper	mg/kg	296.	350.	50	0*	75-125	L580589-01	WG598710
Lead	mg/kg	247.	410.	50	0*	75-125	L580589-01	WG598710
Nickel	mg/kg	87.1	57.0	50	60.2*	75-125	L580589-01	WG598710
Selenium	mg/kg	39.5	0	50	79.0	75-125	L580589-01	WG598710
Silver	mg/kg	43.2	0.990	50	84.4	75-125	L580589-01	WG598710
Zinc	mg/kg	361.	490.	50	0*	75-125	L580589-01	WG598710
TPH (GC/FID) Low Fraction	mg/kg	17.5	0	5.5	63.6	55-109	L581010-01	WG598772
a,a,a-Trifluorotoluene(FID)					101.7	59-128		WG598772
Benzene	mg/l	0.0210	0	.025	84.0	51-134	L580977-01	WG598738
Ethylbenzene	mg/l	0.0275	0	.025	110.	64-135	L580977-01	WG598738
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L580977-01	WG598738
Total Xylenes	mg/l	0.0826	0	.075	110.	64-133	L580977-01	WG598738
4-Bromofluorobenzene					108.2	82-120		WG598738
Dibromofluoromethane					97.22	82-126		WG598738
Toluene-d8					96.90	92-112		WG598738
a,a,a-Trifluorotoluene					107.9	90-116		WG598738
Arsenic	mg/kg	47.3	8.00	50	78.6	75-125	L580831-76	WG598850
Barium	mg/kg	106.	63.0	50	86.0	75-125	L580831-76	WG598850
Cadmium	mg/kg	39.8	0	50	79.6	75-125	L580831-76	WG598850
Chromium	mg/kg	50.6	10.0	50	81.2	75-125	L580831-76	WG598850
Copper	mg/kg	63.6	22.1	50	83.0	75-125	L580831-76	WG598850
Lead	mg/kg	329.	62.0	50	534.*	75-125	L580831-76	WG598850
Nickel	mg/kg	50.8	13.3	50	75.0	75-125	L580831-76	WG598850
Selenium	mg/kg	38.6	0	50	77.2	75-125	L580831-76	WG598850
Silver	mg/kg	40.7	0	50	81.4	75-125	L580831-76	WG598850
Zinc	mg/kg	110.	97.3	50	25.4*	75-125	L580831-76	WG598850
1-Methylnaphthalene	mg/kg	0.0229	0	.033	69.5	25-155	L580961-03	WG598781
2-Chloronaphthalene	mg/kg	0.0238	0	.033	72.2	31-153	L580961-03	WG598781

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
2-Methylnaphthalene	mg/kg	0.0223	0	.033	67.5	22-172	L580961-03	WG598781
Acenaphthene	mg/kg	0.0259	0	.033	78.4	43-133	L580961-03	WG598781
Acenaphthylene	mg/kg	0.0277	0	.033	83.8	42-146	L580961-03	WG598781
Anthracene	mg/kg	0.0219	0	.033	66.3	38-153	L580961-03	WG598781
Benzo(a)anthracene	mg/kg	0.0208	0	.033	63.0	31-142	L580961-03	WG598781
Benzo(a)pyrene	mg/kg	0.0230	0	.033	69.7	26-152	L580961-03	WG598781
Benzo(b)fluoranthene	mg/kg	0.0227	0	.033	68.8	10-188	L580961-03	WG598781
Benzo(g,h,i)perylene	mg/kg	0.0214	0	.033	65.0	10-176	L580961-03	WG598781
Benzo(k)fluoranthene	mg/kg	0.0227	0	.033	68.9	22-163	L580961-03	WG598781
Chrysene	mg/kg	0.0210	0	.033	63.5	26-146	L580961-03	WG598781
Dibenz(a,h)anthracene	mg/kg	0.0217	0	.033	65.7	10-160	L580961-03	WG598781
Fluoranthene	mg/kg	0.0213	0	.033	64.6	23-160	L580961-03	WG598781
Fluorene	mg/kg	0.0252	0	.033	76.4	44-143	L580961-03	WG598781
Indeno(1,2,3-cd)pyrene	mg/kg	0.0209	0	.033	63.4	10-157	L580961-03	WG598781
Naphthalene	mg/kg	0.0236	0	.033	71.6	22-156	L580961-03	WG598781
Phenanthrene	mg/kg	0.0291	0	.033	88.1	23-164	L580961-03	WG598781
Pyrene	mg/kg	0.0242	0	.033	73.2	12-170	L580961-03	WG598781
2-Fluorobiphenyl					66.83	34-129		WG598781
Nitrobenzene-d5					63.30	14-141		WG598781
p-Terphenyl-d14					94.51	25-139		WG598781
Chromium,Hexavalent	mg/kg	0.680	0	20	3.40*	50-150	L580790-02	WG598467
1-Methylnaphthalene	mg/kg	0.0587	0	.033	178.*	25-155	L580831-72	WG598704
2-Chloronaphthalene	mg/kg	0.0254	0	.033	77.0	31-153	L580831-72	WG598704
2-Methylnaphthalene	mg/kg	0.0735	0	.033	223.*	22-172	L580831-72	WG598704
Acenaphthene	mg/kg	0.0226	0.0340	.033	583.*	43-133	L580831-72	WG598704
Acenaphthylene	mg/kg	0.0344	0	.033	104.	42-146	L580831-72	WG598704
Anthracene	mg/kg	0.294	0.0820	.033	643.*	38-153	L580831-72	WG598704
Benzo(a)anthracene	mg/kg	0.543	0.230	.033	948.*	31-142	L580831-72	WG598704
Benzo(a)pyrene	mg/kg	0.556	0.230	.033	989.*	26-152	L580831-72	WG598704
Benzo(b)fluoranthene	mg/kg	0.898	0.380	.033	1570*	10-188	L580831-72	WG598704
Benzo(g,h,i)perylene	mg/kg	0.151	0.0580	.033	282.*	10-176	L580831-72	WG598704
Benzo(k)fluoranthene	mg/kg	0.232	0.120	.033	341.*	22-163	L580831-72	WG598704
Chrysene	mg/kg	0.462	0.200	.033	794.*	26-146	L580831-72	WG598704
Dibenz(a,h)anthracene	mg/kg	0.0412	0	.033	125.	10-160	L580831-72	WG598704
Fluoranthene	mg/kg	1.71	0.600	.033	3370*	23-160	L580831-72	WG598704
Fluorene	mg/kg	0.163	0	.033	493.*	44-143	L580831-72	WG598704
Indeno(1,2,3-cd)pyrene	mg/kg	0.158	0.0600	.033	297.*	10-157	L580831-72	WG598704
Naphthalene	mg/kg	0.0496	0	.033	150.	22-156	L580831-72	WG598704
Phenanthrene	mg/kg	1.29	0.350	.033	2860*	23-164	L580831-72	WG598704
Pyrene	mg/kg	1.19	0.440	.033	2270*	12-170	L580831-72	WG598704
2-Fluorobiphenyl					75.39	34-129		WG598704
Nitrobenzene-d5					79.62	14-141		WG598704
p-Terphenyl-d14					92.18	25-139		WG598704
Ethylbenzene	mg/l	0.0261	0.00240	.025	94.9	64-135	L581543-22	WG599371
Total Xylenes	mg/l	0.0723	0	.075	96.4	64-133	L581543-22	WG599371
4-Bromofluorobenzene					99.32	82-120		WG599371
Dibromofluoromethane					96.44	82-126		WG599371
Toluene-d8					101.5	92-112		WG599371
a,a,a-Trifluorotoluene					104.4	90-116		WG599371
TPH (GC/FID) High Fraction	ppm	47.8	0	60	79.7	50-150	L581013-04	WG598785
o-Terphenyl					83.73	50-150		WG598785

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Level II

L581023

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 26, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch	
			Ref Res	TV					
Chloride	mg/l	58.9	7.20	50	103.	80-120	L580944-01	WG599421	
Sulfate	mg/l	58.4	8.80	50	99.2	80-120	L581505-02	WG599425	
Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.117	0.116	93.6	44-131	0.860	21	L581032-01	WG598789
Ethylbenzene	mg/kg	0.122	0.123	97.3	38-139	0.970	27	L581032-01	WG598789
Toluene	mg/kg	0.118	0.117	94.1	43-127	0.280	21	L581032-01	WG598789
Total Xylenes	mg/kg	0.364	0.367	97.0	38-137	0.980	26	L581032-01	WG598789
4-Bromofluorobenzene				105.7	67-133				WG598789
Dibromofluoromethane				101.6	72-135				WG598789
Toluene-d8				102.3	90-113				WG598789
a,a,a-Trifluorotoluene				105.2	89-115				WG598789
Mercury	mg/kg	0.279	0.247	112.	80-120	12.2	20	L581023-01	WG598751
Mercury	mg/kg	0.248	0.246	99.2	80-120	0.810	20	L581023-02	WG598752
Arsenic	mg/kg	45.5	45.7	85.2	75-125	0.439	20	L580580-13	WG598710
Barium	mg/kg	142.	146.	91.0	75-125	2.78	20	L580580-13	WG598710
Cadmium	mg/kg	46.3	45.9	91.9	75-125	0.868	20	L580580-13	WG598710
Chromium	mg/kg	56.6	57.1	95.7	75-125	0.880	20	L580580-13	WG598710
Copper	mg/kg	62.1	65.2	90.2	75-125	4.87	20	L580580-13	WG598710
Lead	mg/kg	144.	161.	24.0*	75-125	11.1	20	L580580-13	WG598710
Nickel	mg/kg	53.4	53.3	86.6	75-125	0.187	20	L580580-13	WG598710
Selenium	mg/kg	39.5	39.6	79.0	75-125	0.253	20	L580580-13	WG598710
Silver	mg/kg	44.6	44.9	88.9	75-125	0.670	20	L580580-13	WG598710
Zinc	mg/kg	302.	326.	88.0	75-125	7.64	20	L580580-13	WG598710
Arsenic	mg/kg	49.0	48.5	82.6	75-125	1.03	20	L580589-01	WG598710
Cadmium	mg/kg	44.6	43.5	86.6	75-125	2.50	20	L580589-01	WG598710
Chromium	mg/kg	174.	135.	8.00*	75-125	25.2*	20	L580589-01	WG598710
Copper	mg/kg	340.	296.	0*	75-125	13.8	20	L580589-01	WG598710
Lead	mg/kg	355.	247.	0*	75-125	35.9*	20	L580589-01	WG598710
Nickel	mg/kg	95.0	87.1	76.0	75-125	8.68	20	L580589-01	WG598710
Selenium	mg/kg	40.4	39.5	80.8	75-125	2.25	20	L580589-01	WG598710
Silver	mg/kg	45.1	43.2	88.2	75-125	4.30	20	L580589-01	WG598710
Zinc	mg/kg	451.	361.	0*	75-125	22.2*	20	L580589-01	WG598710
TPH (GC/FID) Low Fraction	mg/kg	12.2	17.5	44.4*	55-109	35.5*	20	L581010-01	WG598772
a,a,a-Trifluorotoluene(FID)				100.7	59-128				WG598772
Benzene	mg/l	0.0211	0.0210	84.6	51-134	0.630	20	L580977-01	WG598738
Ethylbenzene	mg/l	0.0275	0.0275	110.	64-135	0.0100	20	L580977-01	WG598738
Toluene	mg/l	0.0236	0.0231	94.4	61-126	2.15	20	L580977-01	WG598738
Total Xylenes	mg/l	0.0821	0.0826	109.	64-133	0.680	20	L580977-01	WG598738
4-Bromofluorobenzene				108.1	82-120				WG598738
Dibromofluoromethane				96.98	82-126				WG598738
Toluene-d8				97.09	92-112				WG598738
a,a,a-Trifluorotoluene				108.3	90-116				WG598738

\* Performance of this Analyte is outside of established criteria.  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 26, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Arsenic	mg/kg	51.3	47.3	86.6	75-125	8.11	20	L580831-76		WG598850
Barium	mg/kg	112.	106.	98.0	75-125	5.50	20	L580831-76		WG598850
Cadmium	mg/kg	43.4	39.8	86.8	75-125	8.65	20	L580831-76		WG598850
Chromium	mg/kg	55.2	50.6	90.4	75-125	8.70	20	L580831-76		WG598850
Copper	mg/kg	68.1	63.6	92.0	75-125	6.83	20	L580831-76		WG598850
Lead	mg/kg	117.	329.	110.	75-125	95.1*	20	L580831-76		WG598850
Nickel	mg/kg	54.6	50.8	82.6	75-125	7.21	20	L580831-76		WG598850
Selenium	mg/kg	43.2	38.6	86.4	75-125	11.2	20	L580831-76		WG598850
Silver	mg/kg	45.7	40.7	91.4	75-125	11.6	20	L580831-76		WG598850
Zinc	mg/kg	119.	110.	43.4*	75-125	7.86	20	L580831-76		WG598850
1-Methylnaphthalene	mg/kg	0.0258	0.0229	78.3	25-155	11.9	27	L580961-03		WG598781
2-Chloronaphthalene	mg/kg	0.0262	0.0238	79.5	31-153	9.61	22	L580961-03		WG598781
2-Methylnaphthalene	mg/kg	0.0248	0.0223	75.3	22-172	10.9	29	L580961-03		WG598781
Acenaphthene	mg/kg	0.0284	0.0259	86.1	43-133	9.39	26	L580961-03		WG598781
Acenaphthylene	mg/kg	0.0302	0.0277	91.5	42-146	8.78	22	L580961-03		WG598781
Anthracene	mg/kg	0.0251	0.0219	76.2	38-153	13.9	27	L580961-03		WG598781
Benzo(a)anthracene	mg/kg	0.0221	0.0208	67.1	31-142	6.34	31	L580961-03		WG598781
Benzo(a)pyrene	mg/kg	0.0250	0.0230	75.7	26-152	8.35	32	L580961-03		WG598781
Benzo(b)fluoranthene	mg/kg	0.0248	0.0227	75.2	10-188	8.98	33	L580961-03		WG598781
Benzo(g,h,i)perylene	mg/kg	0.0236	0.0214	71.6	10-176	9.69	30	L580961-03		WG598781
Benzo(k)fluoranthene	mg/kg	0.0245	0.0227	74.1	22-163	7.28	29	L580961-03		WG598781
Chrysene	mg/kg	0.0226	0.0210	68.3	26-146	7.35	30	L580961-03		WG598781
Dibenz(a,h)anthracene	mg/kg	0.0241	0.0217	72.9	10-160	10.4	39	L580961-03		WG598781
Fluoranthene	mg/kg	0.0236	0.0213	71.6	23-160	10.1	22	L580961-03		WG598781
Fluorene	mg/kg	0.0276	0.0252	83.7	44-143	9.03	23	L580961-03		WG598781
Indeno(1,2,3-cd)pyrene	mg/kg	0.0232	0.0209	70.3	10-157	10.3	40	L580961-03		WG598781
Naphthalene	mg/kg	0.0256	0.0236	77.6	22-156	8.03	27	L580961-03		WG598781
Phenanthrene	mg/kg	0.0306	0.0291	92.7	23-164	5.08	25	L580961-03		WG598781
Pyrene	mg/kg	0.0260	0.0242	78.9	12-170	7.51	24	L580961-03		WG598781
2-Fluorobiphenyl				73.21	34-129					WG598781
Nitrobenzene-d5				69.76	14-141					WG598781
p-Terphenyl-d14				97.54	25-139					WG598781
Chromium, Hexavalent	mg/kg	3.76	0.680	18.8*	50-150	139.*	20	L580790-02		WG598467
1-Methylnaphthalene	mg/kg	0.0542	0.0587	164.*	25-155	7.95	27	L580831-72		WG598704
2-Chloronaphthalene	mg/kg	0.0209	0.0254	63.3	31-153	19.6	22	L580831-72		WG598704
2-Methylnaphthalene	mg/kg	0.0603	0.0735	182.*	22-172	19.8	29	L580831-72		WG598704
Acenaphthene	mg/kg	0.133	0.226	301.*	43-133	51.6*	26	L580831-72		WG598704
Acenaphthylene	mg/kg	0.0352	0.0344	107.	42-146	2.34	22	L580831-72		WG598704
Anthracene	mg/kg	0.308	0.294	686.*	38-153	4.70	27	L580831-72		WG598704
Benzo(a)anthracene	mg/kg	0.856	0.543	1900*	31-142	44.7*	31	L580831-72		WG598704
Benzo(a)pyrene	mg/kg	0.803	0.556	1740*	26-152	36.3*	32	L580831-72		WG598704
Benzo(b)fluoranthene	mg/kg	1.50	0.898	3400*	10-188	50.3*	33	L580831-72		WG598704
Benzo(g,h,i)perylene	mg/kg	0.158	0.151	302.*	10-176	4.41	30	L580831-72		WG598704
Benzo(k)fluoranthene	mg/kg	0.519	0.232	1210*	22-163	76.3*	29	L580831-72		WG598704
Chrysene	mg/kg	0.780	0.462	1760*	26-146	51.2*	30	L580831-72		WG598704
Dibenz(a,h)anthracene	mg/kg	0.0641	0.0412	194.*	10-160	43.6*	39	L580831-72		WG598704
Fluoranthene	mg/kg	2.43	1.71	5550*	23-160	34.7*	22	L580831-72		WG598704
Fluorene	mg/kg	0.123	0.163	372.*	44-143	27.9*	23	L580831-72		WG598704
Indeno(1,2,3-cd)pyrene	mg/kg	0.178	0.158	357.*	10-157	11.7	40	L580831-72		WG598704
Naphthalene	mg/kg	0.0592	0.0496	179.*	22-156	17.6	27	L580831-72		WG598704
Phenanthrene	mg/kg	1.35	1.29	3030*	23-164	4.44	25	L580831-72		WG598704
Pyrene	mg/kg	1.66	1.19	3710*	12-170	33.2*	24	L580831-72		WG598704
2-Fluorobiphenyl				59.81	34-129					WG598704

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June 26, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Nitrobenzene-d5				67.41	14-141					
p-Terphenyl-d14				80.71	25-139					
Ethylbenzene	mg/l	0.0273	0.0261	99.8	64-135	4.58	20	L581543-22		WG599371
Total Xylenes	mg/l	0.0756	0.0723	101.	64-133	4.50	20	L581543-22		WG599371
4-Bromofluorobenzene				102.0	82-120					WG599371
Dibromofluoromethane				97.03	82-126					WG599371
Toluene-d8				102.1	92-112					WG599371
a,a,a-Trifluorotoluene				102.2	90-116					WG599371
TPH (GC/FID) High Fraction	ppm	46.7	47.8	77.8	50-150	2.36	40	L581013-04		WG598785
o-Terphenyl				76.53	50-150					WG598785
Chloride	mg/l	57.2	58.9	100.	80-120	2.93	20	L580944-01		WG599421
Sulfate	mg/l	58.2	58.4	98.8	80-120	0.343	20	L581505-02		WG599425

Batch number /Run number / Sample number cross reference

WG598789: R2218333: L581023-01 02  
WG598704: R2219814: L581023-01  
WG598752: R2219953: L581023-02  
WG598751: R2219955: L581023-01  
WG598710: R2220354: L581023-01  
WG598763: R2220573: L581023-01 02  
WG598728: R2220801: L581023-01  
WG598772: R2221535: L581023-01 02  
WG598738: R2221874: L581023-03 04 05 06  
WG598850: R2222454: L581023-02  
WG598785: R2222873: L581023-01 02  
WG598781: R2223393: L581023-02  
WG598467: R2223515: L581023-01 02  
WG598797: R2223573: L581023-01  
WG599187: R2223593: L581023-01  
WG599296: R2224676: L581023-02  
WG599344: R2224773: L581023-02  
WG599371: R2224838: L581023-03  
WG598982: R2224920: L581023-02  
WG599421: R2225473: L581023-04 05 06  
WG599425: R2226933: L581023-03  
WG599287: R2227333: L581023-03 04 05 06

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

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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.







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Tax I.D. 62-0814289

Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593548

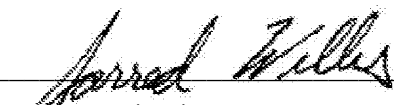
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELLL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELLL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	34.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.2	0.10	mg/l	9056	09/08/12	1
Sulfate	510	50.	mg/l	9056	09/07/12	10
Alkalinity	580	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	580	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.7		su	9040C	09/11/12	1
Specific Conductance	2300		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	5.5	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	1400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0027	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.012	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.035	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.014	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.38	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	52.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.053	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	23.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	3.2	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.9	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	440	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	2.4	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	0.055	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.4		% Rec.	8015D/GRO	09/08/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.3		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	0.19	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	62.7		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	53.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	39.1		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	62.9		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	78.2		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	85.1		% Rec.	8270 C	09/10/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	190	20.	mg/l	9056	09/07/12	20
Sulfate	1000	100	mg/l	9056	09/07/12	20
Fluoride	1.2	0.10	mg/l	300.0	09/10/12	1
Alkalinity	510	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	510	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.9		su	9040C	09/11/12	1
Specific Conductance	2700		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	2400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.018	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.0062	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.44	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.022	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.47	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	73.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.083	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	31.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	4.4	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.4	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	720	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	3.5	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	89.8		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	101.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	54.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	37.4		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	67.7		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.4		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	82.8		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	94.8		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-02 (PH) - 7.9@15.1c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593548-01	WG611870	SAMP	pH	R2339874	T8
	WG611310	SAMP	Bromoform	R2333913	J5
	WG611310	SAMP	2-Chloroethyl vinyl ether	R2333913	J6J3
	WG611581	SAMP	Benzidine	R2340113	J3
L593548-02	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/16/12 at 13:40:13

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593548-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39

Sample: L593548-02 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39





Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG611428	09/07/12 11:04
Ethene	< .013	mg/l			WG611428	09/07/12 11:04
Methane	< .01	mg/l			WG611428	09/07/12 11:04
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Bromide	< 1	mg/l			WG611270	09/07/12 07:13
Chloride	< 1	mg/l			WG611270	09/07/12 07:13
Sulfate	< 5	mg/l			WG611270	09/07/12 07:13
TOC (Total Organic Carbon)	< 1	mg/l			WG611294	09/07/12 15:38
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
Fluoride	< .1	mg/l			WG611479	09/08/12 07:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611509	09/11/12 17:23
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50

\* Performance of this Analyte is outside of established criteria.

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Quality Assurance Report  
Level II

L593548

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
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Level II

L593548

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	25.0	25.0		0.401	20	L593591-03	WG611270
Chloride	mg/l	32.0	33.0		2.45	20	L593591-05	WG611270
TOC (Total Organic Carbon)	mg/l	1.80	1.80		0.554	20	L593484-01	WG611294
TOC (Total Organic Carbon)	mg/l	1.50	1.50		1.98	20	L593580-14	WG611294
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Dissolved Solids	mg/l	1100	1070		0.468	5	L593597-01	WG611509
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
Mercury,Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075

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Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Ethane	mg/l	.645	0.712	110.	70-130	WG611428
Ethene	mg/l	.635	0.686	108.	70-130	WG611428
Methane	mg/l	.339	0.363	107.	70-130	WG611428
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Bromide	mg/l	40	40.4	101.	90-110	WG611270
Chloride	mg/l	40	39.3	98.3	90-110	WG611270
Sulfate	mg/l	40	39.5	98.8	90-110	WG611270
TOC (Total Organic Carbon)	mg/l	75	72.2	96.2	85-115	WG611294
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	8.08	101.	90-110	WG611479
TPH (GC/FID) High Fraction o-Terphenyl	ppm	1.5	1.50	100. 100.5	50-150 50-150	WG611577 WG611577
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
pH	su	6.03	6.01	99.7	98-101	WG611870
Dissolved Solids	mg/l	8800	8650	98.3	85-115	WG611509
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch
		Known	Val	Result			
Hexachlorobenzene	mg/l	.01		0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01		0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01		0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01		0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01		0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01		0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01		0.00328	32.8	10-96	WG611581
n-Nitrosodiphenylamine	mg/l	.01		0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01		0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01		0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01		0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01		0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01		0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01		0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol					77.84	16-147	WG611581
2-Fluorobiphenyl					70.36	29-127	WG611581
2-Fluorophenol					54.46	10-75	WG611581
Nitrobenzene-d5					66.24	17-119	WG611581
Phenol-d5					35.22	10-63	WG611581
p-Terphenyl-d14					77.90	40-174	WG611581
Mercury, Dissolved	mg/l	.003		0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1		0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1		1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1		1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5		0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1		0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10		10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1		0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10		10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1		1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05		0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05		0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.716	0.712	111.	70-130	0.500	25	WG611428
Ethene	mg/l	0.690	0.686	109.	70-130	0.570	25	WG611428
Methane	mg/l	0.372	0.363	110.	70-130	2.35	25	WG611428
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310

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YOUR LAB OF CHOICE

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310
Bromide	mg/l	40.0	40.4	100.		90-110	0.995	20	WG611270
Chloride	mg/l	39.1	39.3	98.0		90-110	0.510	20	WG611270
Sulfate	mg/l	39.2	39.5	98.0		90-110	0.762	20	WG611270
TOC (Total Organic Carbon)	mg/l	74.5	72.2	99.0		85-115	3.23	20	WG611294
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
Fluoride	mg/l	8.06	8.08	101.		90-110	0.248	20	WG611479
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Dissolved Solids	mg/l	8660	8650	98.0		85-115	0.139	5	WG611509
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acenaphthene	mg/l	0.00538	0.00619	54.0	37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0	34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0	48-167	15.1	26	WG611581
Benziidine	mg/l	0.00251	0.00157	25.0	10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0	46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0	39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0	39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0	42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0	42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0	10-178	21.9	40	WG611581
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Chloride	mg/l	65.5	18.0	50	95.0	80-120	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	56.7	4.60	50	104.	80-120	L593525-01	WG611294
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/l	5.92	0	5.5	108. 105.2	55-109 62-128	L593663-01	WG611405 WG611405
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	4.91	0	5	98.2	80-120	L593917-04	WG611479
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310

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YOUR LAB OF CHOICE

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310	
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310	
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310	
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310	
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310	
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310	
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310	
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310	
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310	
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310	
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310	
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310	

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Chloride	mg/l	67.5	65.5	99.0	80-120	3.01	20	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	55.8	56.7	102.	80-120	1.72	20	L593525-01	WG611294
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	4.99	4.91	99.8	80-120	1.62	20	L593917-04	WG611479
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611428: R2333855: L593548-01 02

WG611310: R2333913: L593548-01 02

\* Performance of this Analyte is outside of established criteria.

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



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WG611270: R2334933: L593548-01 02  
WG611294: R2335813: L593548-01 02  
WG611526: R2336033: L593548-01 02  
WG611405: R2337235: L593548-01 02  
WG611718: R2338293: L593548-01 02  
WG611479: R2338776: L593548-01  
WG611577: R2339033: L593548-01 02  
WG611624: R2339313: L593548-02  
WG611870: R2339874: L593548-01 02  
WG611833: R2339913: L593548-01 02  
WG611509: R2339933: L593548-01 02  
WG611835: R2339973: L593548-01 02  
WG611838: R2339993: L593548-01 02  
WG611581: R2340113: L593548-01 02  
WG611391: R2340917: L593548-01 02  
WG612075: R2344074: L593548-01 02  
WG612100: R2347893: L593548-01 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.'



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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.



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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585015

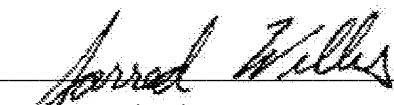
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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

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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	100	20.	mg/l	9056	07/17/12	20
Fluoride	1.9	0.10	mg/l	9056	07/14/12	1
Sulfate	1200	100	mg/l	9056	07/17/12	20
Alkalinity	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	8.1		su	9040C	07/17/12	1
Specific Conductance	3000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0054	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.021	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.010	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	34.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	0.023	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.039	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	2.3	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	3.5	0.20	mg/l	200.7	07/20/12	1
Sodium,Dissolved	660	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	1.3	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	101.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	80.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c



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

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	38.1		% Rec.	8270 C	07/18/12	1
Phenol-d5	31.9		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	72.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	80.2		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	53.7		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	82.1		% Rec.	8270 C	07/18/12	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.

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Reported: 07/29/12 12:29 Printed: 07/29/12 12:30

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585015-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:08

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585015-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/19



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* 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

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Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG602990	07/17/12 06:44
Sulfate	< 5	mg/l			WG602990	07/17/12 06:44
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Chloride	mg/l	100.	100.	0.995	20	L585015-01	WG602990
Sulfate	mg/l	1200	1200	1.68	20	L585015-01	WG602990
Sulfate	mg/l	1800	1800	0.557	20	L585249-01	WG602990
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Lithium,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	0	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	0	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	0	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	0	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	0	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582

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		Known Val	Result			
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812

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		Known Val	Result			
Chloride	mg/l	40	40.0	100.	90-110	WG602990
Sulfate	mg/l	40	38.8	97.0	90-110	WG602990
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benizidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743

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Level II

L585015

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Alkalinity	mg/l	110.	110.	110.	85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
Chloride	mg/l	39.9	40.0	100.	90-110	0.250	20	WG602990
Sulfate	mg/l	39.3	38.8	98.0	90-110	1.28	20	WG602990
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benididine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743

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826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		%Rec	Limit	RPD	Limit	Ref Samp	Batch
			Ref							
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20		L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128					WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20		L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20		L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20		L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20		L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20		L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21		L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20		L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20		L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20		L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20		L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20		L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20		L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20		L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20		L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22		L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20		L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20		L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20		L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20		L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20		L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20		L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20		L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20		L584961-16	WG602582

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16		WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16		WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16		WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16		WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16		WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16		WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16		WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16		WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16		WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16		WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16		WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16		WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16		WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16		WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16		WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16		WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16		WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16		WG602582
4-Bromofluorobenzene				104.2	82-120					WG602582
Dibromofluoromethane				104.6	82-126					WG602582
Toluene-d8				105.1	92-112					WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01		WG602812
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02		WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12		WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12		WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12		WG603226

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585015-01  
WG602670: R2256613: L585015-01  
WG602614: R2257834: L585015-01  
WG602809: R2257935: L585015-01  
WG602912: R2257953: L585015-01  
WG602917: R2257954: L585015-01  
WG602582: R2258253: L585015-01  
WG603037: R2258613: L585015-01  
WG602929: R2259213: L585015-01  
WG602812: R2260755: L585015-01  
WG602990: R2260993: L585015-01  
WG602923: R2261115: L585015-01  
WG603320: R2261675: L585015-01  
WG602743: R2262494: L585015-01  
WG603124: R2264154: L585015-01  
WG603226: R2264474: L585015-01  
WG604526: R2276876: L585015-01

\* \* 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.'



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L585015

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Est. 1970

July 29, 2012

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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585014

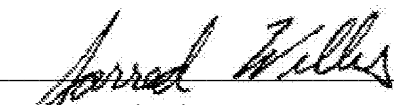
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	2.0	1.0	mg/l	9056	07/14/12	1
Chloride	650	10.	mg/l	9056	07/18/12	10
Fluoride	2.8	0.10	mg/l	9056	07/14/12	1
Sulfate	550	50.	mg/l	9056	07/18/12	10
Alkalinity	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	1.3	0.020	mg/l	RSK175	07/17/12	2
Ethane	BDL	0.026	mg/l	RSK175	07/17/12	2
Ethene	BDL	0.026	mg/l	RSK175	07/17/12	2
pH	7.9		su	9040C	07/17/12	1
Specific Conductance	3700		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.9	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2200	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.015	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.046	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.0098	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.066	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	64.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.092	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	4.6	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	0.11	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.7	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	4.2	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	740	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.1	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	103.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	82.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c





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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	43.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	32.4		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	68.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	74.0		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	57.1		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	75.7		% Rec.	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585014-01 (PH) - 7.9@20.8c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585014-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:07

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585014-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/18



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG603173	07/18/12 10:05
Sulfate	< 5	mg/l			WG603173	07/18/12 10:05
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Sulfate	mg/l	450.	450.	0.222	20	L584127-05	WG603173
Sulfate	mg/l	24.0	24.0	0.416	20	L584127-09	WG603173
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Sulfate	mg/l	150.	150.	1.98	20	L584776-02	WG603173
Sulfate	mg/l	120.	120.	1.65	20	L584776-04	WG603173
Sulfate	mg/l	230.	230.	1.75	20	L584922-01	WG603173
Chloride	mg/l	640.	650.	1.86	20	L585014-01	WG603173
Sulfate	mg/l	540.	550.	1.47	20	L585014-01	WG603173
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Boron,Dissolved	mg/l	0	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	20	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	20	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	20	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury, Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
Chloride	mg/l	40	39.6	99.0	90-110	WG603173
Sulfate	mg/l	40	39.3	98.3	90-110	WG603173
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benztidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L585014

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614

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Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
Alkalinity	mg/l	110.	110.	110.		85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.		77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.		71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.		78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.		81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.		53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0		73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.		54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.		67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.		77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.		68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.		77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.		76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.		77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0		55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.		78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.		77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.		77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.		69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.		76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.		69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.		75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.		63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.		69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.		69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.		53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.		55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.		77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5		82-120			WG602582
Dibromofluoromethane				102.7		82-126			WG602582
Toluene-d8				105.6		92-112			WG602582
Ethane	mg/l	0.732	0.736	114.		70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.		70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.		70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*		98-101	0	20	WG602929
Chloride	mg/l	39.7	39.6	99.0		90-110	0.252	20	WG603173
Sulfate	mg/l	39.3	39.3	98.0		90-110	0	20	WG603173
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.		85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.		85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0		18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0		12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0		10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0		19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0		10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0		30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0		32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0		29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0		16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0		14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0		42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0		10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0		40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0		14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0		39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0		10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0		37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0		34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0		48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0		10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0		46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0		39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0		39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0		42-181	1.28	30	WG602743

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Toluene-d8					104.8	92-112		
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
Chloride	mg/l	65.4	6.50	50	118.	80-120	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium, Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron, Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium, Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium, Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt, Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper, Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron, Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium, Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium, Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese, Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel, Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium, Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium, Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium, Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium, Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc, Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon, Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony, Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic, Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum, Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium, Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene (FID)				98.95	62-128				WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16	WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16	WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16	WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16	WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16	WG602582
4-Bromofluorobenzene				104.2	82-120				WG602582
Dibromofluoromethane				104.6	82-126				WG602582
Toluene-d8				105.1	92-112				WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01	WG602812

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585014

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chloride	mg/l	66.4	65.4	120.	80-120	1.52	20	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02	WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585014-01  
WG602670: R2256613: L585014-01  
WG602614: R2257834: L585014-01  
WG602809: R2257935: L585014-01  
WG602912: R2257953: L585014-01  
WG602917: R2257954: L585014-01  
WG602582: R2258253: L585014-01  
WG603037: R2258613: L585014-01  
WG602929: R2259213: L585014-01  
WG602812: R2260755: L585014-01  
WG603173: R2260933: L585014-01  
WG602923: R2261115: L585014-01  
WG603320: R2261675: L585014-01  
WG602743: R2262494: L585014-01  
WG603124: R2264154: L585014-01  
WG603226: R2264474: L585014-01  
WG604526: R2276876: L585014-01

\* \* 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**

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Aaron Stacy (Olsson)  
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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585014

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585012

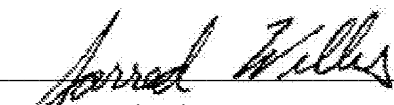
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	64.	1.0	mg/l	9056	07/14/12	1
Fluoride	1.5	0.10	mg/l	9056	07/14/12	1
Sulfate	260	25.	mg/l	9056	07/14/12	5
Alkalinity	620	100	mg/l	2320B	07/18/12	5
Alkalinity,Bicarbonate	620	20.	mg/l	2320B	07/19/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	7.5		su	9040C	07/17/12	1
Specific Conductance	1600		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.0	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	1100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0092	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.0042	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.016	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.090	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	76.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.063	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	46.	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	7.7	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	240	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.7	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585012-01 (PH) - 7.5@21.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L585012-01 (PH) - 7.5@21.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	99.2		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	81.8		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	47.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	38.0		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	78.2		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	86.4		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	62.4		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	88.3		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585012-01 (PH) - 7.5@21.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585012-01	WG602929	SAMP	pH	R2259213	T8
	WG602751	SAMP	TPH (GC/FID) Low Fraction	R2255773	J5

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
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  
07/29/12 at 12:30:10

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585012-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
Bromide	< 1	mg/l			WG602623	07/14/12 06:07
Chloride	< 1	mg/l			WG602623	07/14/12 06:07
Fluoride	< .1	mg/l			WG602623	07/14/12 06:07
Sulfate	< 5	mg/l			WG602623	07/14/12 06:07
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
Alkalinity	< 20	mg/l			WG603112	07/18/12 16:45
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12

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L585012

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	14.0	14.0	2.12	20	L585006-04	WG602623
Sulfate	mg/l	34.0	35.0	1.44	20	L585006-04	WG602623
Sulfate	mg/l	360.	360.	1.40	20	L584743-02	WG602623
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Alkalinity	mg/l	620.	620.	0.810	20	L585012-01	WG603112
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Strontium,Dissolved	mg/l	0.150	0.147	0	20		L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	20		L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	20		L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0		L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0		L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
Bromide	mg/l	40	40.6	102.	90-110	WG602623
Chloride	mg/l	40	40.4	101.	90-110	WG602623
Fluoride	mg/l	8	8.44	106.	90-110	WG602623
Sulfate	mg/l	40	40.3	101.	90-110	WG602623
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
Alkalinity	mg/l	100	110.	110.	85-115	WG603112

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		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benzidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
Bromide	mg/l	40.5	40.6	101.	90-110	0.247	20	WG602623
Chloride	mg/l	40.5	40.4	101.	90-110	0.247	20	WG602623
Fluoride	mg/l	8.44	8.44	106.	90-110	0	20	WG602623
Sulfate	mg/l	40.3	40.3	101.	90-110	0	20	WG602623
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.		77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.		77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.		69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.		76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.		69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.		75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.		63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.		69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.		69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.		53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.		55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.		77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5		82-120			WG602582
Dibromofluoromethane				102.7		82-126			WG602582
Toluene-d8				105.6		92-112			WG602582
Ethane	mg/l	0.732	0.736	114.		70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.		70-130	0.480	25	WG603037

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
Alkalinity	mg/l	100.	110.	100.	85-115	9.52	20	WG603112
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benziidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Chloride	mg/l	52.0	0	50	104.	80-120	L584988-04	WG602623
Sulfate	mg/l	53.7	0	50	107.	80-120	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582

\* Performance of this Analyte is outside of established criteria.

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





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Quality Assurance Report  
Level II

L585012

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Alkalinity	mg/l	1700	1300	500	80.0	80-120	L584999-01	WG603112
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226

Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Chloride	mg/l	51.6	52.0	103.	80-120	0.772	20	L584988-04	WG602623
Sulfate	mg/l	53.2	53.7	106.	80-120	0.935	20	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L585012

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582



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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L584999

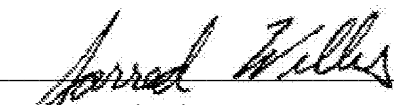
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	21.	1.0	mg/l	9056	07/14/12	1
Chloride	3700	50.	mg/l	9056	07/14/12	50
Fluoride	BDL	0.10	mg/l	9056	07/14/12	1
Sulfate	39.	5.0	mg/l	9056	07/14/12	1
Alkalinity	1300	100	mg/l	2320B	07/18/12	5
Alkalinity,Bicarbonate	1300	20.	mg/l	2320B	07/19/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	0.65	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	7.8		su	9040C	07/17/12	1
Specific Conductance	14000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	150	5.0	mg/l	9060A	07/19/12	5
Dissolved Solids	8000	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.14	0.0050	mg/l	200.8	07/27/12	5
Molybdenum,Dissolved	BDL	0.010	mg/l	200.8	07/27/12	5
Selenium,Dissolved	0.027	0.0050	mg/l	200.8	07/27/12	5
Barium,Dissolved	24.	0.0050	mg/l	200.7	07/25/12	1
Boron,Dissolved	6.9	0.20	mg/l	200.7	07/25/12	1
Calcium,Dissolved	150	0.50	mg/l	200.7	07/25/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/25/12	1
Cobalt,Dissolved	0.019	0.010	mg/l	200.7	07/25/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/25/12	1
Iron,Dissolved	0.34	0.10	mg/l	200.7	07/25/12	1
Lithium,Dissolved	3.4	0.015	mg/l	200.7	07/25/12	1
Magnesium,Dissolved	14.	0.10	mg/l	200.7	07/25/12	1
Manganese,Dissolved	0.15	0.010	mg/l	200.7	07/25/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/25/12	1
Potassium,Dissolved	32.	0.50	mg/l	200.7	07/25/12	1
Silicon,Dissolved	18.	0.20	mg/l	200.7	07/25/12	1
Sodium,Dissolved	2800	2.5	mg/l	200.7	07/25/12	5
Strontium,Dissolved	24.	0.050	mg/l	200.7	07/25/12	5
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/25/12	1
Zinc,Dissolved	0.070	0.030	mg/l	200.7	07/25/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c



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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	21.	1.0	mg/l	8015D/GRO	07/16/12	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.9		% Rec.	8015D/GRO	07/16/12	10
Volatile Organics						
Acetone	BDL	2.5	mg/l	8260B	07/14/12	50
Acrolein	BDL	2.5	mg/l	8260B	07/14/12	50
Acrylonitrile	BDL	0.50	mg/l	8260B	07/14/12	50
Benzene	1.3	0.050	mg/l	8260B	07/14/12	50
Bromobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Bromodichloromethane	BDL	0.050	mg/l	8260B	07/14/12	50
Bromoform	BDL	0.050	mg/l	8260B	07/14/12	50
Bromomethane	BDL	0.25	mg/l	8260B	07/14/12	50
n-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
sec-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
tert-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Carbon tetrachloride	BDL	0.050	mg/l	8260B	07/14/12	50
Chlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Chlorodibromomethane	BDL	0.050	mg/l	8260B	07/14/12	50
Chloroethane	BDL	0.25	mg/l	8260B	07/14/12	50
2-Chloroethyl vinyl ether	BDL	2.5	mg/l	8260B	07/14/12	50
Chloroform	BDL	0.25	mg/l	8260B	07/14/12	50
Chloromethane	BDL	0.12	mg/l	8260B	07/14/12	50
2-Chlorotoluene	BDL	0.050	mg/l	8260B	07/14/12	50
4-Chlorotoluene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dibromo-3-Chloropropane	BDL	0.25	mg/l	8260B	07/14/12	50
1,2-Dibromoethane	BDL	0.050	mg/l	8260B	07/14/12	50
Dibromomethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,4-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Dichlorodifluoromethane	BDL	0.25	mg/l	8260B	07/14/12	50
1,1-Dichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
cis-1,2-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
trans-1,2-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
cis-1,3-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
trans-1,3-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
2,2-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
Di-isopropyl ether	BDL	0.050	mg/l	8260B	07/14/12	50

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Ethylbenzene	0.12	0.050	mg/l	8260B	07/14/12	50
Hexachloro-1,3-butadiene	BDL	0.050	mg/l	8260B	07/14/12	50
Isopropylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
p-Isopropyltoluene	BDL	0.050	mg/l	8260B	07/14/12	50
2-Butanone (MEK)	BDL	0.50	mg/l	8260B	07/14/12	50
Methylene Chloride	BDL	0.25	mg/l	8260B	07/14/12	50
4-Methyl-2-pentanone (MIBK)	BDL	0.50	mg/l	8260B	07/14/12	50
Methyl tert-butyl ether	BDL	0.050	mg/l	8260B	07/14/12	50
Naphthalene	BDL	0.25	mg/l	8260B	07/14/12	50
n-Propylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Styrene	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,1,2-Tetrachloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2,2-Tetrachloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2-Trichlorotrifluoroethane	BDL	0.050	mg/l	8260B	07/14/12	50
Tetrachloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
Toluene	3.3	0.25	mg/l	8260B	07/14/12	50
1,2,3-Trichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2,4-Trichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,1-Trichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2-Trichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
Trichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
Trichlorofluoromethane	BDL	0.25	mg/l	8260B	07/14/12	50
1,2,3-Trichloropropane	BDL	0.12	mg/l	8260B	07/14/12	50
1,2,4-Trimethylbenzene	0.20	0.050	mg/l	8260B	07/14/12	50
1,2,3-Trimethylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3,5-Trimethylbenzene	0.13	0.050	mg/l	8260B	07/14/12	50
Vinyl chloride	BDL	0.050	mg/l	8260B	07/14/12	50
Xylenes, Total	2.4	0.15	mg/l	8260B	07/14/12	50
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	07/14/12	50
Dibromofluoromethane	104.		% Rec.	8260B	07/14/12	50
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	50
TPH (GC/FID) High Fraction	6.2	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	97.1		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	07/17/12	1
Anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzidine	BDL	0.010	mg/l	8270C	07/17/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	07/17/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	07/17/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	07/17/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	07/17/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	07/17/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	07/17/12	1
Chrysene	BDL	0.0010	mg/l	8270C	07/17/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	07/17/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	07/17/12	1
Fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Fluorene	0.0021	0.0010	mg/l	8270C	07/17/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	07/17/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	07/17/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	07/17/12	1
Hexachloroethane	BDL	0.010	mg/l	8270C	07/17/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
Isophorone	BDL	0.010	mg/l	8270C	07/17/12	1
Naphthalene	0.014	0.0010	mg/l	8270C	07/17/12	1
Nitrobenzene	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	07/17/12	1
Phenanthrene	0.0018	0.0010	mg/l	8270C	07/17/12	1
Benzylbutyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Di-n-butyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Diethyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Dimethyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Di-n-octyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	07/17/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	07/17/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dimethylphenol	0.036	0.010	mg/l	8270C	07/17/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c





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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Nitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Phenol	0.046	0.010	mg/l	8270C	07/17/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Surrogate Recovery						
2-Fluorophenol	30.5		% Rec.	8270C	07/17/12	1
Phenol-d5	20.0		% Rec.	8270C	07/17/12	1
Nitrobenzene-d5	65.5		% Rec.	8270C	07/17/12	1
2-Fluorobiphenyl	85.4		% Rec.	8270C	07/17/12	1
2,4,6-Tribromophenol	106.		% Rec.	8270C	07/17/12	1
p-Terphenyl-d14	82.5		% Rec.	8270C	07/17/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L584999-01 (PH) - 7.8@21.2c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L584999-01	WG602929	SAMP	pH	R2259213	T8
	WG602901	SAMP	n-Nitrosodiphenylamine	R2260773	J4
	WG604526	SAMP	Molybdenum,Dissolved	R2276876	O

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
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  
07/29/12 at 12:30:05

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L584999-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/18 Added CODICP per JW 7/16/12 JE.



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L584999

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

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Chloride	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Sulfate	< 5	mg/l			WG602614	07/14/12 06:04
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37

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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
1,2,4-Trichlorobenzene	< .01	mg/l			WG602901	07/17/12 17:22
2,4,6-Trichlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dichlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dimethylphenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dinitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dinitrotoluene	< .01	mg/l			WG602901	07/17/12 17:22
2,6-Dinitrotoluene	< .01	mg/l			WG602901	07/17/12 17:22
2-Chloronaphthalene	< .001	mg/l			WG602901	07/17/12 17:22
2-Chlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2-Nitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
3,3-Dichlorobenzidine	< .01	mg/l			WG602901	07/17/12 17:22
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602901	07/17/12 17:22
4-Bromophenyl-phenylether	< .01	mg/l			WG602901	07/17/12 17:22
4-Chloro-3-methylphenol	< .01	mg/l			WG602901	07/17/12 17:22
4-Chlorophenyl-phenylether	< .01	mg/l			WG602901	07/17/12 17:22
4-Nitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
Acenaphthene	< .001	mg/l			WG602901	07/17/12 17:22
Acenaphthylene	< .001	mg/l			WG602901	07/17/12 17:22
Anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Benzidine	< .01	mg/l			WG602901	07/17/12 17:22
Benzo(a)anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(a)pyrene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(b)fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(g,h,i)perylene	< .001	mg/l			WG602901	07/17/12 17:22

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		Units	% Rec			
Benzo(k)fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Benzylbutyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-chloroethyl)ether	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-ethylhexyl)phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Chrysene	< .001	mg/l			WG602901	07/17/12 17:22
Di-n-butyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Di-n-octyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Dibenz(a,h)anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Diethyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Dimethyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Fluorene	< .001	mg/l			WG602901	07/17/12 17:22
Hexachloro-1,3-butadiene	< .01	mg/l			WG602901	07/17/12 17:22
Hexachlorobenzene	< .001	mg/l			WG602901	07/17/12 17:22
Hexachlorocyclopentadiene	< .01	mg/l			WG602901	07/17/12 17:22
Hexachloroethane	< .01	mg/l			WG602901	07/17/12 17:22
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602901	07/17/12 17:22
Isophorone	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodimethylamine	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodiphenylamine	< .01	mg/l			WG602901	07/17/12 17:22
Naphthalene	< .001	mg/l			WG602901	07/17/12 17:22
Nitrobenzene	< .01	mg/l			WG602901	07/17/12 17:22
Pentachlorophenol	< .001	mg/l			WG602901	07/17/12 17:22
Phenanthrene	< .001	mg/l			WG602901	07/17/12 17:22
Phenol	< .01	mg/l			WG602901	07/17/12 17:22
Pyrene	< .001	mg/l			WG602901	07/17/12 17:22
2,4,6-Tribromophenol		% Rec.	98.77	16-147	WG602901	07/17/12 17:22
2-Fluorobiphenyl		% Rec.	89.64	29-127	WG602901	07/17/12 17:22
2-Fluorophenol		% Rec.	31.61	10-75	WG602901	07/17/12 17:22
Nitrobenzene-d5		% Rec.	69.52	17-119	WG602901	07/17/12 17:22
Phenol-d5		% Rec.	20.40	10-63	WG602901	07/17/12 17:22
p-Terphenyl-d14		% Rec.	102.3	40-174	WG602901	07/17/12 17:22
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
Alkalinity	< 20	mg/l			WG603112	07/18/12 16:45
Dissolved Solids	< 10	mg/l			WG602877	07/20/12 10:10
TOC (Total Organic Carbon)	< 1	mg/l			WG603332	07/19/12 09:10
Barium,Dissolved	< .005	mg/l			WG603426	07/25/12 22:09
Boron,Dissolved	< .2	mg/l			WG603426	07/25/12 22:09
Calcium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Chromium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Cobalt,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Copper,Dissolved	< .02	mg/l			WG603426	07/25/12 22:09
Iron,Dissolved	< .1	mg/l			WG603426	07/25/12 22:09
Lithium,Dissolved	< .015	mg/l			WG603426	07/25/12 22:09
Magnesium,Dissolved	< .1	mg/l			WG603426	07/25/12 22:09
Manganese,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Nickel,Dissolved	< .02	mg/l			WG603426	07/25/12 22:09
Potassium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Silicon,Dissolved	< .2	mg/l			WG603426	07/25/12 22:09
Sodium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Strontium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Vanadium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Zinc,Dissolved	< .03	mg/l			WG603426	07/25/12 22:09
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Chloride	mg/l	5.00	5.10	1.38	20	L584609-10	WG602614
Sulfate	mg/l	31.0	31.0	0.322	20	L584609-10	WG602614
Chloride	mg/l	80.0	81.0	1.62	20	L584755-01	WG602614
Chloride	mg/l	66.0	66.0	0.755	20	L584524-23	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Sulfate	mg/l	81.0	81.0	0.124	20	L584524-23	WG602614
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Alkalinity	mg/l	620.	620.	0.810	20	L585012-01	WG603112
Dissolved Solids	mg/l	190.	197.	1.53	5	L584879-08	WG602877
TOC (Total Organic Carbon)	mg/l	150.	150.	1.78	20	L584999-01	WG603332
TOC (Total Organic Carbon)	mg/l	2.10	2.00	6.30	20	L585627-02	WG603332
Barium,Dissolved	mg/l	0.0470	0.0467	1.06	20	L585179-08	WG603426
Boron,Dissolved	mg/l	0	0	0	0	L585179-08	WG603426
Calcium,Dissolved	mg/l	34.0	34.0	0.587	20	L585179-08	WG603426
Chromium,Dissolved	mg/l	0	0.00180	NA	20	L585179-08	WG603426
Cobalt,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Copper,Dissolved	mg/l	0	0.00100	NA	20	L585179-08	WG603426
Iron,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Lithium,Dissolved	mg/l	0	0.00690	NA	20	L585179-08	WG603426
Magnesium,Dissolved	mg/l	11.0	11.0	2.76	20	L585179-08	WG603426
Manganese,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Nickel,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Potassium,Dissolved	mg/l	1.70	1.60	4.28	20	L585179-08	WG603426
Silicon,Dissolved	mg/l	1.80	1.80	1.12*	0	L585179-08	WG603426
Sodium,Dissolved	mg/l	5.70	5.70	0.351	20	L585179-08	WG603426
Strontium,Dissolved	mg/l	0.120	0.118	0.844	20	L585179-08	WG603426

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Vanadium,Dissolved	mg/l	0	0.00300	NA	20	L585179-08	WG603426
Zinc,Dissolved	mg/l	0	0.0143	NA	20	L585179-08	WG603426
Antimony,Dissolved	mg/l	0	0	0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Chloride	mg/l	40	40.1	100.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Sulfate	mg/l	40	39.6	99.0	90-110	WG602614

1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582

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Quality Assurance Report  
Level II

L584999

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

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
1,2,4-Trichlorobenzene	mg/l	.01	0.00897	89.7	34-97	WG602901
2,4,6-Trichlorophenol	mg/l	.01	0.00998	99.8	38-113	WG602901
2,4-Dichlorophenol	mg/l	.01	0.00948	94.8	46-105	WG602901
2,4-Dimethylphenol	mg/l	.01	0.00895	89.5	47-108	WG602901
2,4-Dinitrophenol	mg/l	.01	0.00525	52.5	10-121	WG602901
2,4-Dinitrotoluene	mg/l	.01	0.0103	103.	59-117	WG602901
2,6-Dinitrotoluene	mg/l	.01	0.0101	101.	57-110	WG602901
2-Chloronaphthalene	mg/l	.01	0.00972	97.2	47-106	WG602901
2-Chlorophenol	mg/l	.01	0.00741	74.1	37-90	WG602901
2-Nitrophenol	mg/l	.01	0.0100	100.	40-112	WG602901
3,3-Dichlorobenzidine	mg/l	.01	0.00960	96.0	58-116	WG602901
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00696	69.6	21-119	WG602901

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
4-Bromophenyl-phenylether	mg/l	.01	0.00969	96.9	63-120	WG602901
4-Chloro-3-methylphenol	mg/l	.01	0.00810	81.0	50-105	WG602901
4-Chlorophenyl-phenylether	mg/l	.01	0.0107	107.	58-115	WG602901
4-Nitrophenol	mg/l	.01	0.00239	23.9	10-53	WG602901
Acenaphthene	mg/l	.01	0.00976	97.6	52-107	WG602901
Acenaphthylene	mg/l	.01	0.0106	106.	55-119	WG602901
Anthracene	mg/l	.01	0.0110	110.	65-114	WG602901
Benzidine	mg/l	.01	0.00465	46.5	10-55	WG602901
Benzo(a)anthracene	mg/l	.01	0.0103	103.	68-113	WG602901
Benzo(a)pyrene	mg/l	.01	0.0101	101.	68-115	WG602901
Benzo(b)fluoranthene	mg/l	.01	0.0100	100.	67-114	WG602901
Benzo(g,h,i)perylene	mg/l	.01	0.00993	99.3	52-132	WG602901
Benzo(k)fluoranthene	mg/l	.01	0.0107	107.	62-116	WG602901
Benzylbutyl phthalate	mg/l	.01	0.0107	107.	12-166	WG602901
Bis(2-chlorethoxy)methane	mg/l	.01	0.00865	86.5	56-116	WG602901
Bis(2-chloroethyl)ether	mg/l	.01	0.00781	78.1	39-109	WG602901
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00816	81.6	43-108	WG602901
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0103	103.	61-147	WG602901
Chrysene	mg/l	.01	0.0103	103.	65-114	WG602901
Di-n-butyl phthalate	mg/l	.01	0.0107	107.	56-133	WG602901
Di-n-octyl phthalate	mg/l	.01	0.00972	97.2	59-143	WG602901
Dibenz(a,h)anthracene	mg/l	.01	0.00993	99.3	54-130	WG602901
Diethyl phthalate	mg/l	.01	0.0113	113.	33-136	WG602901
Dimethyl phthalate	mg/l	.01	0.0104	104.	10-152	WG602901
Fluoranthene	mg/l	.01	0.0105	105.	66-120	WG602901
Fluorene	mg/l	.01	0.0107	107.	58-110	WG602901
Hexachloro-1,3-butadiene	mg/l	.01	0.00966	96.6	34-115	WG602901
Hexachlorobenzene	mg/l	.01	0.00874	87.4	55-117	WG602901
Hexachlorocyclopentadiene	mg/l	.01	0.00946	94.6	20-121	WG602901
Hexachloroethane	mg/l	.01	0.00884	88.4	24-93	WG602901
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.0100	100.	56-129	WG602901
Isophorone	mg/l	.01	0.00703	70.3	55-108	WG602901
n-Nitrosodi-n-propylamine	mg/l	.01	0.00879	87.9	50-115	WG602901
n-Nitrosodimethylamine	mg/l	.01	0.00463	46.3	12-68	WG602901
n-Nitrosodiphenylamine	mg/l	.01	0.00968	96.8	55-98	WG602901
Naphthalene	mg/l	.01	0.00914	91.4	42-103	WG602901
Nitrobenzene	mg/l	.01	0.00799	79.9	39-102	WG602901
Pentachlorophenol	mg/l	.01	0.00639	63.9	10-101	WG602901
Phenanthrene	mg/l	.01	0.00973	97.3	61-110	WG602901
Phenol	mg/l	.01	0.00223	22.3	10-53	WG602901
Pyrene	mg/l	.01	0.0106	106.	65-116	WG602901
2,4,6-Tribromophenol				96.80	16-147	WG602901
2-Fluorobiphenyl				98.72	29-127	WG602901
2-Fluorophenol				34.74	10-75	WG602901
Nitrobenzene-d5				83.47	17-119	WG602901
Phenol-d5				21.62	10-63	WG602901
p-Terphenyl-d14				96.47	40-174	WG602901

Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
Alkalinity	mg/l	100	110.	110.	85-115	WG603112
Dissolved Solids	mg/l	8800	8560	97.3	85-115	WG602877
TOC (Total Organic Carbon)	mg/l	75	74.7	99.5	85-115	WG603332

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Level II

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July 29, 2012

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		Known Val	Result			
Barium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Boron,Dissolved	mg/l	1	0.977	97.7	85-115	WG603426
Calcium,Dissolved	mg/l	10	10.5	105.	85-115	WG603426
Chromium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Cobalt,Dissolved	mg/l	1	1.07	107.	85-115	WG603426
Copper,Dissolved	mg/l	1	0.977	97.7	85-115	WG603426
Iron,Dissolved	mg/l	1	0.963	96.3	85-115	WG603426
Lithium,Dissolved	mg/l	.5	0.561	112.	85-115	WG603426
Magnesium,Dissolved	mg/l	10	10.8	108.	85-115	WG603426
Manganese,Dissolved	mg/l	1	1.05	105.	85-115	WG603426
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603426
Potassium,Dissolved	mg/l	10	9.72	97.2	85-115	WG603426
Silicon,Dissolved	mg/l	1	1.06	106.	85-115	WG603426
Sodium,Dissolved	mg/l	10	10.4	104.	85-115	WG603426
Strontium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Vanadium,Dissolved	mg/l	1	1.00	100.	85-115	WG603426
Zinc,Dissolved	mg/l	1	1.07	107.	85-115	WG603426
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Chloride	mg/l	40.1	40.1	100.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Sulfate	mg/l	39.5	39.6	99.0	90-110	0.253	20	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037

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Quality Assurance Report  
Level II

L584999

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

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
1,2,4-Trichlorobenzene	mg/l	0.00946	0.00897	94.0	34-97	5.28	21	WG602901
2,4,6-Trichlorophenol	mg/l	0.0105	0.00998	105.	38-113	4.86	29	WG602901
2,4-Dichlorophenol	mg/l	0.00992	0.00948	99.0	46-105	4.53	20	WG602901
2,4-Dimethylphenol	mg/l	0.00923	0.00895	92.0	47-108	2.98	20	WG602901
2,4-Dinitrophenol	mg/l	0.00565	0.00525	56.0	10-121	7.33	40	WG602901
2,4-Dinitrotoluene	mg/l	0.0105	0.0103	105.	59-117	1.28	20	WG602901
2,6-Dinitrotoluene	mg/l	0.0100	0.0101	100.	57-110	1.06	20	WG602901
2-Chloronaphthalene	mg/l	0.00938	0.00972	94.0	47-106	3.55	20	WG602901
2-Chlorophenol	mg/l	0.00767	0.00741	77.0	37-90	3.47	21	WG602901
2-Nitrophenol	mg/l	0.0106	0.0100	106.	40-112	5.54	22	WG602901
3,3-Dichlorobenzidine	mg/l	0.00968	0.00960	97.0	58-116	0.803	20	WG602901
4,6-Dinitro-2-methylphenol	mg/l	0.00877	0.00696	88.0	21-119	23.0	40	WG602901
4-Bromophenyl-phenylether	mg/l	0.0101	0.00969	101.	63-120	3.97	20	WG602901
4-Chloro-3-methylphenol	mg/l	0.00865	0.00810	86.0	50-105	6.58	20	WG602901
4-Chlorophenyl-phenylether	mg/l	0.0102	0.0107	102.	58-115	5.08	20	WG602901
4-Nitrophenol	mg/l	0.00254	0.00239	25.0	10-53	5.79	40	WG602901
Acenaphthene	mg/l	0.00989	0.00976	99.0	52-107	1.37	20	WG602901
Acenaphthylene	mg/l	0.0103	0.0106	103.	55-119	2.94	20	WG602901
Anthracene	mg/l	0.0113	0.0110	113.	65-114	2.65	20	WG602901
Benzo(a)anthracene	mg/l	0.00499	0.00465	50.0	10-55	7.05	40	WG602901
Benzo(a)pyrene	mg/l	0.0102	0.0103	102.	68-113	0.559	20	WG602901
Benzo(b)fluoranthene	mg/l	0.0103	0.0101	102.	68-115	1.71	20	WG602901
Benzo(g,h,i)perylene	mg/l	0.0102	0.0100	102.	67-114	1.24	20	WG602901
Benzo(k)fluoranthene	mg/l	0.00973	0.00993	97.0	52-132	2.01	20	WG602901
Benzylbutyl phthalate	mg/l	0.0107	0.0107	107.	62-116	0.236	20	WG602901
Benzylbutyl phthalate	mg/l	0.0103	0.0107	103.	12-166	3.52	20	WG602901
Bis(2-chlorethoxy)methane	mg/l	0.00879	0.00865	88.0	56-116	1.67	20	WG602901
Bis(2-chloroethyl)ether	mg/l	0.00842	0.00781	84.0	39-109	7.45	23	WG602901
Bis(2-chloroisopropyl)ether	mg/l	0.00829	0.00816	83.0	43-108	1.60	20	WG602901
Bis(2-ethylhexyl)phthalate	mg/l	0.0105	0.0103	105.	61-147	2.21	20	WG602901
Chrysene	mg/l	0.0109	0.0103	109.	65-114	6.33	20	WG602901
Di-n-butyl phthalate	mg/l	0.0120	0.0107	120.	56-133	10.9	20	WG602901
Di-n-octyl phthalate	mg/l	0.00997	0.00972	100.	59-143	2.54	20	WG602901
Dibenz(a,h)anthracene	mg/l	0.00996	0.00993	100.	54-130	0.347	20	WG602901
Diethyl phthalate	mg/l	0.0111	0.0113	110.	33-136	2.07	20	WG602901
Dimethyl phthalate	mg/l	0.0105	0.0104	105.	10-152	1.17	22	WG602901
Fluoranthene	mg/l	0.0113	0.0105	113.	66-120	7.50	20	WG602901
Fluorene	mg/l	0.0108	0.0107	108.	58-110	0.287	20	WG602901
Hexachloro-1,3-butadiene	mg/l	0.00966	0.00966	96.0	34-115	0.0179	22	WG602901
Hexachlorobenzene	mg/l	0.00923	0.00874	92.0	55-117	5.37	20	WG602901
Hexachlorocyclopentadiene	mg/l	0.00928	0.00946	93.0	20-121	1.87	27	WG602901
Hexachloroethane	mg/l	0.00856	0.00884	86.0	24-93	3.24	25	WG602901
Indeno(1,2,3-cd)pyrene	mg/l	0.00999	0.0100	100.	56-129	0.584	20	WG602901
Isophorone	mg/l	0.00731	0.00703	73.0	55-108	3.99	20	WG602901
n-Nitrosodi-n-propylamine	mg/l	0.00880	0.00879	88.0	50-115	0.125	20	WG602901
n-Nitrosodimethylamine	mg/l	0.00462	0.00463	46.0	12-68	0.261	31	WG602901
n-Nitrosodiphenylamine	mg/l	0.0102	0.00968	102*	55-98	5.39	20	WG602901
Naphthalene	mg/l	0.00890	0.00914	89.0	42-103	2.63	20	WG602901
Nitrobenzene	mg/l	0.00803	0.00799	80.0	39-102	0.487	20	WG602901
Pentachlorophenol	mg/l	0.00742	0.00639	74.0	10-101	14.9	40	WG602901
Phenanthrene	mg/l	0.0105	0.00973	105.	61-110	7.44	20	WG602901
Phenol	mg/l	0.00234	0.00223	23.0	10-53	4.78	20	WG602901
Pyrene	mg/l	0.0106	0.0106	106.	65-116	0.393	20	WG602901
2,4,6-Tribromophenol				106.8	16-147			WG602901
2-Fluorobiphenyl				94.98	29-127			WG602901
2-Fluorophenol				35.70	10-75			WG602901

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Nitrobenzene-d5				84.12	17-119			
Phenol-d5				22.25	10-63			
p-Terphenyl-d14				98.20	40-174			
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
Alkalinity	mg/l	100.	110.	100.	85-115	9.52	20	WG603112
Dissolved Solids	mg/l	8650	8560	98.0	85-115	1.02	20	WG602877
TOC (Total Organic Carbon)	mg/l	74.5	74.7	99.0	85-115	0.201	20	WG603332

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
Chloride	mg/l	55.9	5.10	50	102.	80-120	L584609-09	WG602614
Sulfate	mg/l	73.1	23.0	50	100.	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Alkalinity	mg/l	1700	1300	500	80.0	80-120	L584999-01	WG603112
TOC (Total Organic Carbon)	mg/l	51.7	1.50	50	100.	80-120	L585184-08	WG603332
Barium,Dissolved	mg/l	1.07	0.0467	1	102.	75-125	L585179-08	WG603426
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L585179-08	WG603426
Calcium,Dissolved	mg/l	44.3	34.0	10	103.	75-125	L585179-08	WG603426
Chromium,Dissolved	mg/l	1.03	0.00180	1	103.	75-125	L585179-08	WG603426
Cobalt,Dissolved	mg/l	1.06	0	1	106.	75-125	L585179-08	WG603426
Copper,Dissolved	mg/l	0.980	0.00100	1	97.9	75-125	L585179-08	WG603426
Iron,Dissolved	mg/l	0.974	0	1	97.4	75-125	L585179-08	WG603426
Lithium,Dissolved	mg/l	0.561	0.00690	.5	111.	75-125	L585179-08	WG603426
Magnesium,Dissolved	mg/l	21.2	11.0	10	102.	75-125	L585179-08	WG603426
Manganese,Dissolved	mg/l	1.04	0	1	104.	75-125	L585179-08	WG603426
Nickel,Dissolved	mg/l	0.908	0	1	90.8	75-125	L585179-08	WG603426
Potassium,Dissolved	mg/l	11.4	1.60	10	98.0	75-125	L585179-08	WG603426
Silicon,Dissolved	mg/l	2.89	1.80	1	109.	75-125	L585179-08	WG603426
Sodium,Dissolved	mg/l	16.0	5.70	10	103.	75-125	L585179-08	WG603426

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July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Strontium,Dissolved	mg/l	1.15	0.118	1	103.	75-125	L585179-08	WG603426
Vanadium,Dissolved	mg/l	1.01	0.00300	1	101.	75-125	L585179-08	WG603426
Zinc,Dissolved	mg/l	1.09	0.0143	1	108.	75-125	L585179-08	WG603426
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20	L584609-09	WG602614
Chloride	mg/l	55.0	55.9	99.8	80-120	1.62	20	L584609-09	WG602614
Sulfate	mg/l	72.2	73.1	98.4	80-120	1.24	20	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582

\* Performance of this Analyte is outside of established criteria.

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L584999

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16	WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16	WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16	WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16	WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16	WG602582
4-Bromofluorobenzene				104.2	82-120				WG602582
Dibromofluoromethane				104.6	82-126				WG602582
Toluene-d8				105.1	92-112				WG602582
Alkalinity	mg/l	1800	1700	100.	80-120	5.71	20	L584999-01	WG603112
TOC (Total Organic Carbon)	mg/l	54.5	51.7	106.	80-120	5.25	20	L585184-08	WG603332
Barium,Dissolved	mg/l	1.07	1.07	102.	75-125	0	20	L585179-08	WG603426
Boron,Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L585179-08	WG603426
Calcium,Dissolved	mg/l	43.9	44.3	99.0	75-125	0.907	20	L585179-08	WG603426
Chromium,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L585179-08	WG603426
Cobalt,Dissolved	mg/l	1.06	1.06	106.	75-125	0	20	L585179-08	WG603426
Copper,Dissolved	mg/l	0.991	0.980	99.0	75-125	1.12	20	L585179-08	WG603426
Iron,Dissolved	mg/l	0.975	0.974	97.5	75-125	0.103	20	L585179-08	WG603426
Lithium,Dissolved	mg/l	0.566	0.561	112.	75-125	0.887	20	L585179-08	WG603426
Magnesium,Dissolved	mg/l	21.2	21.2	102.	75-125	0	20	L585179-08	WG603426
Manganese,Dissolved	mg/l	1.05	1.04	105.	75-125	0.957	20	L585179-08	WG603426
Nickel,Dissolved	mg/l	0.930	0.908	93.0	75-125	2.39	20	L585179-08	WG603426
Potassium,Dissolved	mg/l	11.4	11.4	98.0	75-125	0	20	L585179-08	WG603426
Silicon,Dissolved	mg/l	2.86	2.89	106.	75-125	1.04	20	L585179-08	WG603426
Sodium,Dissolved	mg/l	16.0	16.0	103.	75-125	0	20	L585179-08	WG603426
Strontium,Dissolved	mg/l	1.15	1.15	103.	75-125	0	20	L585179-08	WG603426
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L585179-08	WG603426
Zinc,Dissolved	mg/l	1.09	1.09	108.	75-125	0	20	L585179-08	WG603426

\* 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

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Quality Assurance Report  
Level II

L584999

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L584999-01  
WG602670: R2256613: L584999-01  
WG602614: R2257834: L584999-01  
WG602912: R2257953: L584999-01  
WG602582: R2258253: L584999-01  
WG603037: R2258613: L584999-01  
WG602929: R2259213: L584999-01  
WG602901: R2260773: L584999-01  
WG603320: R2261675: L584999-01  
WG603112: R2262454: L584999-01  
WG603133: R2262473: L584999-01  
WG602877: R2264173: L584999-01  
WG603332: R2264373: L584999-01  
WG603426: R2272613: L584999-01  
WG604526: R2276876: L584999-01

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

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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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Monday July 16, 2012

Report Number: L583596

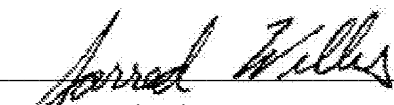
Samples Received: 07/06/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/07/12	1
Chloride	28.	1.0	mg/l	9056	07/07/12	1
Fluoride	2.1	0.10	mg/l	9056	07/07/12	1
Sulfate	150	10.	mg/l	9056	07/09/12	2
Alkalinity	540	100	mg/l	2320B	07/10/12	5
Alkalinity,Bicarbonate	540	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/10/12	1
Methane	BDL	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	7.7		su	9040C	07/09/12	1
Specific Conductance	1300		umhos/cm	9050A	07/13/12	1
TOC (Total Organic Carbon)	4.7	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	820	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Arsenic,Dissolved	0.0020	0.0010	mg/l	200.8	07/13/12	1
Molybdenum,Dissolved	0.012	0.0020	mg/l	200.8	07/13/12	1
Selenium,Dissolved	0.017	0.0010	mg/l	200.8	07/13/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.062	0.0050	mg/l	200.7	07/13/12	1
Boron,Dissolved	0.26	0.20	mg/l	200.7	07/13/12	1
Calcium,Dissolved	50.	0.50	mg/l	200.7	07/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/13/12	1
Lithium,Dissolved	0.055	0.015	mg/l	200.7	07/16/12	1
Magnesium,Dissolved	51.	0.10	mg/l	200.7	07/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/13/12	1
Silicon,Dissolved	16.	0.20	mg/l	200.7	07/13/12	1
Sodium,Dissolved	190	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	2.2	0.010	mg/l	200.7	07/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L583596-01 (PH) - 7.7@18.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.032	0.030	mg/l	200.7	07/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	101.		% Rec.	8015D/GRO	07/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L583596-01 (PH) - 7.7@18.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/06/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/06/12	1
Dibromofluoromethane	108.		% Rec.	8260B	07/06/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	07/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	94.6		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	42.1		% Rec.	8270 C	07/10/12	1
Phenol-d5	33.8		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	75.5		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	90.0		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	70.1		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	98.2		% Rec.	8270 C	07/10/12	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: 07/16/12 15:58 Printed: 07/16/12 15:58  
L583596-01 (PH) - 7.7@18.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L583596-01	WG601565	SAMP	pH	R2246534	T8
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
07/16/12 at 15:58:53

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L583596-01 Account: ENCRCO Received: 07/06/12 09:00 Due Date: 07/13/12 00:00 RPT Date: 07/16/12 15:58  
Removed Nitrate and Nitrite per AS. jw 7/16



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG601549	07/07/12 13:38
Ethene	< .013	mg/l			WG601549	07/07/12 13:38
Methane	< .01	mg/l			WG601549	07/07/12 13:38
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,1-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG601474	07/06/12 20:10
1,2-Dibromoethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,3,5-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,4-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
2,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
2-Butanone (MEK)	< .01	mg/l			WG601474	07/06/12 20:10
2-Chloroethyl vinyl ether	< .05	mg/l			WG601474	07/06/12 20:10
2-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG601474	07/06/12 20:10
Acetone	< .05	mg/l			WG601474	07/06/12 20:10
Acrolein	< .025	mg/l			WG601474	07/06/12 20:10
Acrylonitrile	< .01	mg/l			WG601474	07/06/12 20:10
Benzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromodichloromethane	< .001	mg/l			WG601474	07/06/12 20:10
Bromoform	< .001	mg/l			WG601474	07/06/12 20:10
Bromomethane	< .005	mg/l			WG601474	07/06/12 20:10
Carbon tetrachloride	< .001	mg/l			WG601474	07/06/12 20:10
Chlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Chlorodibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Chloroethane	< .005	mg/l			WG601474	07/06/12 20:10
Chloroform	< .005	mg/l			WG601474	07/06/12 20:10
Chloromethane	< .0025	mg/l			WG601474	07/06/12 20:10
cis-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
cis-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Di-isopropyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Dibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Dichlorodifluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Ethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Hexachloro-1,3-butadiene	< .001	mg/l			WG601474	07/06/12 20:10
Isopropylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Methyl tert-butyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Methylene Chloride	< .005	mg/l			WG601474	07/06/12 20:10
n-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
n-Propylbenzene	< .001	mg/l			WG601474	07/06/12 20:10

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG601474	07/06/12 20:10
p-Isopropyltoluene	< .001	mg/l			WG601474	07/06/12 20:10
sec-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Styrene	< .001	mg/l			WG601474	07/06/12 20:10
tert-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Tetrachloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Toluene	< .005	mg/l			WG601474	07/06/12 20:10
trans-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
trans-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Trichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Trichlorofluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Vinyl chloride	< .001	mg/l			WG601474	07/06/12 20:10
Xylenes, Total	< .003	mg/l			WG601474	07/06/12 20:10
4-Bromofluorobenzene		% Rec.	109.6	82-120	WG601474	07/06/12 20:10
Dibromofluoromethane		% Rec.	106.0	82-126	WG601474	07/06/12 20:10
Toluene-d8		% Rec.	103.7	92-112	WG601474	07/06/12 20:10
Bromide	< 1	mg/l			WG601502	07/07/12 06:56
Chloride	< 1	mg/l			WG601502	07/07/12 06:56
Fluoride	< .1	mg/l			WG601502	07/07/12 06:56
TPH (GC/FID) Low Fraction	< .1	mg/l			WG601602	07/08/12 17:47
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	62-128	WG601602	07/08/12 17:47
pH	4.28	su			WG601565	07/09/12 14:31
Sulfate	< 5	mg/l			WG601787	07/09/12 15:40
Alkalinity	< 20	mg/l			WG601754	07/10/12 07:30
TOC (Total Organic Carbon)	< 1	mg/l			WG601789	07/10/12 15:33
Dissolved Solids	< 10	mg/l			WG601740	07/11/12 14:44
1,2,4-Trichlorobenzene	< .01	mg/l			WG601533	07/10/12 19:34
2,4,6-Trichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dimethylphenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2,6-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2-Chloronaphthalene	< .001	mg/l			WG601533	07/10/12 19:34
2-Chlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
3,3-Dichlorobenzidine	< .01	mg/l			WG601533	07/10/12 19:34
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Bromophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Chloro-3-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Chlorophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
Acenaphthene	< .001	mg/l			WG601533	07/10/12 19:34

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July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthylene	< .001	mg/l			WG601533	07/10/12 19:34
Anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzidine	< .01	mg/l			WG601533	07/10/12 19:34
Benzo(a)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(a)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(b)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(g,h,i)perylene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(k)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzylbutyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Bis(2-chlorethoxy)methane	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroethyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Chrysene	< .001	mg/l			WG601533	07/10/12 19:34
Di-n-butyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Di-n-octyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dibenz(a,h)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Diethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dimethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Fluorene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachloro-1,3-butadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachlorobenzene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachlorocyclopentadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachloroethane	< .01	mg/l			WG601533	07/10/12 19:34
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Isophorone	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodi-n-propylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodimethylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodiphenylamine	< .01	mg/l			WG601533	07/10/12 19:34
Naphthalene	< .001	mg/l			WG601533	07/10/12 19:34
Nitrobenzene	< .01	mg/l			WG601533	07/10/12 19:34
Pentachlorophenol	< .001	mg/l			WG601533	07/10/12 19:34
Phenanthrene	< .001	mg/l			WG601533	07/10/12 19:34
Phenol	< .01	mg/l			WG601533	07/10/12 19:34
Pyrene	< .001	mg/l			WG601533	07/10/12 19:34
2,4,6-Tribromophenol		% Rec.	79.49	16-147	WG601533	07/10/12 19:34
2-Fluorobiphenyl		% Rec.	89.38	29-127	WG601533	07/10/12 19:34
2-Fluorophenol		% Rec.	45.06	10-75	WG601533	07/10/12 19:34
Nitrobenzene-d5		% Rec.	82.43	17-119	WG601533	07/10/12 19:34
Phenol-d5		% Rec.	32.67	10-63	WG601533	07/10/12 19:34
p-Terphenyl-d14		% Rec.	93.01	40-174	WG601533	07/10/12 19:34
TPH (GC/FID) High Fraction	< .1	ppm			WG601857	07/11/12 22:42
o-Terphenyl		% Rec.	105.6	50-150	WG601857	07/11/12 22:42
Mercury,Dissolved	< .0002	mg/l			WG602022	07/12/12 22:10
Barium,Dissolved	< .005	mg/l			WG602246	07/13/12 11:07
Boron,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Calcium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Chromium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Cobalt,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Copper,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Iron,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07
Magnesium,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Manganese,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Nickel,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Potassium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Silicon,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Sodium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Strontium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Vanadium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Zinc,Dissolved	< .03	mg/l			WG602246	07/13/12 11:07
Specific Conductance	1.42	umhos/cm			WG602349	07/13/12 14:32
Antimony,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Arsenic,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Molybdenum,Dissolved	< .002	mg/l			WG602266	07/13/12 19:17
Selenium,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	16.0	17.0	2.99	20	L583531-01	WG601502
Chloride	mg/l	0	0	0	20	L583531-02	WG601502
pH	su	7.80	7.80	0.385	1	L583500-02	WG601565
pH	su	8.40	8.40	0.357	1	L583831-10	WG601565
Sulfate	mg/l	150.	150.	0.664	20	L583596-01	WG601787
Alkalinity	mg/l	280.	280.	1.77	20	L583651-01	WG601754
Alkalinity	mg/l	590.	600.	1.34	20	L583819-04	WG601754
TOC (Total Organic Carbon)	mg/l	270.	260.	3.33	20	L582994-04	WG601789
TOC (Total Organic Carbon)	mg/l	210.	220.	4.22	20	L583672-01	WG601789
Dissolved Solids	mg/l	15.0	15.0	0	5	L583641-05	WG601740
Mercury,Dissolved	mg/l	0	0	0	20	L583595-01	WG602022
Barium,Dissolved	mg/l	0.0220	0.0214	2.31	20	L583784-01	WG602246
Boron,Dissolved	mg/l	0	0.0112	NA	0	L583784-01	WG602246
Calcium,Dissolved	mg/l	18.0	17.8	1.12	20	L583784-01	WG602246
Chromium,Dissolved	mg/l	0	0.00210	NA	20	L583784-01	WG602246
Cobalt,Dissolved	mg/l	0	0.00270	NA	20	L583784-01	WG602246
Copper,Dissolved	mg/l	0	0.00740	NA	20	L583784-01	WG602246
Iron,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Magnesium,Dissolved	mg/l	1.60	1.53	5.10	20	L583784-01	WG602246
Manganese,Dissolved	mg/l	0	0.00460	NA	20	L583784-01	WG602246
Nickel,Dissolved	mg/l	0	0.000600	NA	20	L583784-01	WG602246
Potassium,Dissolved	mg/l	1.00	1.06	6.23	20	L583784-01	WG602246
Silicon,Dissolved	mg/l	1.60	1.57	1.89*	0	L583784-01	WG602246
Sodium,Dissolved	mg/l	3.00	2.96	1.68	20	L583784-01	WG602246

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Strontium,Dissolved	mg/l	0.0470	0.0488	3.33	20	L583784-01	WG602246
Vanadium,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Zinc,Dissolved	mg/l	0.220	0.210	2.82	20	L583784-01	WG602246
Specific Conductance	umhos/cm	5.10	5.00	1.39	20	L583454-02	WG602349
Specific Conductance	umhos/cm	6000	6100	1.15	20	L584342-01	WG602349
Antimony,Dissolved	mg/l	0.00160	0.00180	9.91	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0460	0.0520	12.0	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0120	0.0121	5.08*	0	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.80	1.90	5.41	20	L584127-02	WG602266

Analyte	Units	Laboratory Control		% Rec	Limit	Batch
		Known Val	Sample Result			
Ethane	mg/l	.645	0.705	109.	70-130	WG601549
Ethene	mg/l	.635	0.678	107.	70-130	WG601549
Methane	mg/l	.339	0.361	107.	70-130	WG601549
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0285	114.	77-128	WG601474
1,1,1-Trichloroethane	mg/l	.025	0.0292	117.	71-126	WG601474
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0281	112.	78-130	WG601474
1,1,2-Trichloroethane	mg/l	.025	0.0277	111.	81-121	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0313	125.	53-143	WG601474
1,1-Dichloroethane	mg/l	.025	0.0279	111.	73-123	WG601474
1,1-Dichloroethene	mg/l	.025	0.0294	118.	54-134	WG601474
1,1-Dichloropropene	mg/l	.025	0.0278	111.	67-127	WG601474
1,2,3-Trichlorobenzene	mg/l	.025	0.0265	106.	77-130	WG601474
1,2,3-Trichloropropane	mg/l	.025	0.0309	123.	68-130	WG601474
1,2,3-Trimethylbenzene	mg/l	.025	0.0264	105.	77-126	WG601474
1,2,4-Trichlorobenzene	mg/l	.025	0.0266	106.	76-127	WG601474
1,2,4-Trimethylbenzene	mg/l	.025	0.0293	117.	77-129	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0254	102.	55-142	WG601474
1,2-Dibromoethane	mg/l	.025	0.0289	116.	78-124	WG601474
1,2-Dichlorobenzene	mg/l	.025	0.0257	103.	82-121	WG601474
1,2-Dichloroethane	mg/l	.025	0.0288	115.	69-128	WG601474
1,2-Dichloropropane	mg/l	.025	0.0280	112.	77-121	WG601474
1,3,5-Trimethylbenzene	mg/l	.025	0.0293	117.	78-127	WG601474
1,3-Dichlorobenzene	mg/l	.025	0.0282	113.	77-127	WG601474
1,3-Dichloropropane	mg/l	.025	0.0281	112.	78-117	WG601474
1,4-Dichlorobenzene	mg/l	.025	0.0258	103.	79-117	WG601474
2,2-Dichloropropane	mg/l	.025	0.0262	105.	63-130	WG601474
2-Butanone (MEK)	mg/l	.125	0.147	118.	58-144	WG601474
2-Chloroethyl vinyl ether	mg/l	.125	0.114	90.9	26-172	WG601474
2-Chlorotoluene	mg/l	.025	0.0279	112.	78-123	WG601474
4-Chlorotoluene	mg/l	.025	0.0286	114.	78-122	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.147	118.	58-147	WG601474
Acetone	mg/l	.125	0.151	121.	49-153	WG601474
Acrolein	mg/l	.125	0.126	101.	10-181	WG601474
Acrylonitrile	mg/l	.125	0.144	115.	53-153	WG601474
Benzene	mg/l	.025	0.0259	104.	72-119	WG601474
Bromobenzene	mg/l	.025	0.0280	112.	76-121	WG601474
Bromodichloromethane	mg/l	.025	0.0274	109.	75-127	WG601474
Bromoform	mg/l	.025	0.0276	110.	61-136	WG601474
Bromomethane	mg/l	.025	0.0317	127.	42-172	WG601474
Carbon tetrachloride	mg/l	.025	0.0300	120.	63-129	WG601474

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0281	112.	78-123	WG601474
Chlorodibromomethane	mg/l	.025	0.0277	111.	73-128	WG601474
Chloroethane	mg/l	.025	0.0299	120.	52-164	WG601474
Chloroform	mg/l	.025	0.0278	111.	76-122	WG601474
Chloromethane	mg/l	.025	0.0276	110.	50-141	WG601474
cis-1,2-Dichloroethene	mg/l	.025	0.0283	113.	75-121	WG601474
cis-1,3-Dichloropropene	mg/l	.025	0.0276	110.	74-124	WG601474
Di-isopropyl ether	mg/l	.025	0.0277	111.	66-129	WG601474
Dibromomethane	mg/l	.025	0.0277	111.	77-124	WG601474
Dichlorodifluoromethane	mg/l	.025	0.0330	132.	33-173	WG601474
Ethylbenzene	mg/l	.025	0.0280	112.	77-124	WG601474
Hexachloro-1,3-butadiene	mg/l	.025	0.0271	108.	71-134	WG601474
Isopropylbenzene	mg/l	.025	0.0286	115.	74-126	WG601474
Methyl tert-butyl ether	mg/l	.025	0.0303	121.	67-127	WG601474
Methylene Chloride	mg/l	.025	0.0278	111.	67-122	WG601474
n-Butylbenzene	mg/l	.025	0.0267	107.	74-130	WG601474
n-Propylbenzene	mg/l	.025	0.0279	112.	77-125	WG601474
Naphthalene	mg/l	.025	0.0268	107.	70-134	WG601474
p-Isopropyltoluene	mg/l	.025	0.0298	119.	77-132	WG601474
sec-Butylbenzene	mg/l	.025	0.0292	117.	77-130	WG601474
Styrene	mg/l	.025	0.0268	107.	69-145	WG601474
tert-Butylbenzene	mg/l	.025	0.0295	118.	76-131	WG601474
Tetrachloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Toluene	mg/l	.025	0.0273	109.	75-114	WG601474
trans-1,2-Dichloroethene	mg/l	.025	0.0284	113.	63-127	WG601474
trans-1,3-Dichloropropene	mg/l	.025	0.0272	109.	69-124	WG601474
Trichloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Trichlorofluoromethane	mg/l	.025	0.0140	56.0	53-161	WG601474
Vinyl chloride	mg/l	.025	0.0282	113.	55-142	WG601474
Xylenes, Total	mg/l	.075	0.0849	113.	77-123	WG601474
4-Bromofluorobenzene				109.2	82-120	WG601474
Dibromofluoromethane				102.0	82-126	WG601474
Toluene-d8				102.7	92-112	WG601474
Bromide	mg/l	40	41.3	103.	90-110	WG601502
Chloride	mg/l	40	40.0	100.	90-110	WG601502
Fluoride	mg/l	8	8.12	102.	90-110	WG601502
TPH (GC/FID) Low Fraction	mg/l	5.5	6.37	116.	70-124	WG601602
a,a,a-Trifluorotoluene(FID)				109.0	62-128	WG601602
pH	su	5.7	5.71	100.	98-101	WG601565
Sulfate	mg/l	40	39.7	99.3	90-110	WG601787
Alkalinity	mg/l	100	95.7	95.7	85-115	WG601754
TOC (Total Organic Carbon)	mg/l	75	77.2	103.	85-115	WG601789
Dissolved Solids	mg/l	8800	8730	99.2	85-115	WG601740

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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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

July 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00564	56.4	18-130	WG601533
2,4,6-Trichlorophenol	mg/l	.01	0.00700	70.0	12-147	WG601533
2,4-Dichlorophenol	mg/l	.01	0.00748	74.8	10-157	WG601533
2,4-Dimethylphenol	mg/l	.01	0.00799	79.9	19-160	WG601533
2,4-Dinitrophenol	mg/l	.01	0.00682	68.2	10-135	WG601533
2,4-Dinitrotoluene	mg/l	.01	0.00661	66.1	30-168	WG601533
2,6-Dinitrotoluene	mg/l	.01	0.00666	66.6	32-163	WG601533
2-Chloronaphthalene	mg/l	.01	0.00797	79.7	29-149	WG601533
2-Chlorophenol	mg/l	.01	0.00598	59.8	16-129	WG601533
2-Nitrophenol	mg/l	.01	0.00714	71.4	14-158	WG601533
3,3-Dichlorobenzidine	mg/l	.01	0.00746	74.6	42-150	WG601533
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00750	75.0	10-164	WG601533
4-Bromophenyl-phenylether	mg/l	.01	0.00874	87.4	40-166	WG601533
4-Chloro-3-methylphenol	mg/l	.01	0.00762	76.2	14-158	WG601533
4-Chlorophenyl-phenylether	mg/l	.01	0.00868	86.8	39-155	WG601533
4-Nitrophenol	mg/l	.01	0.00100	10.0	10-61	WG601533
Acenaphthene	mg/l	.01	0.00885	88.5	37-159	WG601533
Acenaphthylene	mg/l	.01	0.00788	78.8	34-162	WG601533
Anthracene	mg/l	.01	0.00871	87.1	48-167	WG601533
Benzidine	mg/l	.01	0.00254	25.4	10-86	WG601533
Benzo(a)anthracene	mg/l	.01	0.00921	92.1	46-167	WG601533
Benzo(a)pyrene	mg/l	.01	0.00878	87.8	39-167	WG601533
Benzo(b)fluoranthene	mg/l	.01	0.00891	89.1	39-173	WG601533
Benzo(g,h,i)perylene	mg/l	.01	0.00891	89.1	42-181	WG601533
Benzo(k)fluoranthene	mg/l	.01	0.00955	95.5	42-178	WG601533
Benzylbutyl phthalate	mg/l	.01	0.0101	101.	10-178	WG601533
Bis(2-chlorethoxy)methane	mg/l	.01	0.00863	86.3	34-155	WG601533
Bis(2-chloroethyl)ether	mg/l	.01	0.00693	69.3	22-149	WG601533
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00720	72.0	26-149	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0116	116.	42-191	WG601533
Chrysene	mg/l	.01	0.00966	96.6	46-170	WG601533
Di-n-butyl phthalate	mg/l	.01	0.0100	100.	33-175	WG601533
Di-n-octyl phthalate	mg/l	.01	0.00937	93.7	40-170	WG601533
Dibenz(a,h)anthracene	mg/l	.01	0.00881	88.1	43-187	WG601533
Diethyl phthalate	mg/l	.01	0.0103	103.	10-182	WG601533
Dimethyl phthalate	mg/l	.01	0.00998	99.8	10-165	WG601533
Fluoranthene	mg/l	.01	0.00930	93.0	46-171	WG601533
Fluorene	mg/l	.01	0.00890	89.0	39-163	WG601533
Hexachloro-1,3-butadiene	mg/l	.01	0.00560	56.0	18-136	WG601533
Hexachlorobenzene	mg/l	.01	0.00859	85.9	38-163	WG601533
Hexachlorocyclopentadiene	mg/l	.01	0.00412	41.2	10-142	WG601533
Hexachloroethane	mg/l	.01	0.00459	45.9	10-130	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00879	87.9	42-184	WG601533
Isophorone	mg/l	.01	0.00883	88.3	36-166	WG601533
n-Nitrosodi-n-propylamine	mg/l	.01	0.00802	80.2	27-157	WG601533
n-Nitrosodimethylamine	mg/l	.01	0.00658	65.8	10-96	WG601533
n-Nitrosodiphenylamine	mg/l	.01	0.00892	89.2	41-168	WG601533
Naphthalene	mg/l	.01	0.00732	73.2	26-147	WG601533
Nitrobenzene	mg/l	.01	0.00747	74.7	22-154	WG601533
Pentachlorophenol	mg/l	.01	0.00568	56.8	10-128	WG601533
Phenanthrene	mg/l	.01	0.00932	93.2	46-163	WG601533
Phenol	mg/l	.01	0.00307	30.7	10-69	WG601533
Pyrene	mg/l	.01	0.0109	109.	45-176	WG601533
2,4,6-Tribromophenol				84.23	16-147	WG601533
2-Fluorobiphenyl				92.72	29-127	WG601533
2-Fluorophenol				37.92	10-75	WG601533
Nitrobenzene-d5				80.68	17-119	WG601533
Phenol-d5				28.85	10-63	WG601533
p-Terphenyl-d14				98.23	40-174	WG601533

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	ppm	1.5	1.80	120.	50-150	WG601857
o-Terphenyl				109.9	50-150	WG601857
Mercury, Dissolved	mg/l	.003	0.00333	111.	85-115	WG602022
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG602246
Boron, Dissolved	mg/l	1	0.997	99.7	85-115	WG602246
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG602246
Chromium, Dissolved	mg/l	1	1.05	105.	85-115	WG602246
Cobalt, Dissolved	mg/l	1	1.04	104.	85-115	WG602246
Copper, Dissolved	mg/l	1	1.00	100.	85-115	WG602246
Iron, Dissolved	mg/l	1	1.10	110.	85-115	WG602246
Magnesium, Dissolved	mg/l	10	10.7	107.	85-115	WG602246
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG602246
Nickel, Dissolved	mg/l	1	1.04	104.	85-115	WG602246
Potassium, Dissolved	mg/l	10	9.81	98.1	85-115	WG602246
Silicon, Dissolved	mg/l	1	1.10	110.	85-115	WG602246
Sodium, Dissolved	mg/l	10	10.4	104.	85-115	WG602246
Strontium, Dissolved	mg/l	1	1.06	106.	85-115	WG602246
Vanadium, Dissolved	mg/l	1	1.03	103.	85-115	WG602246
Zinc, Dissolved	mg/l	1	1.03	103.	85-115	WG602246
Specific Conductance	umhos/cm	495	504.	102.	85-115	WG602349
Antimony, Dissolved	mg/l	.05	0.0531	106.	85-115	WG602266
Arsenic, Dissolved	mg/l	.05	0.0495	99.0	85-115	WG602266
Molybdenum, Dissolved	mg/l	.05	0.0513	103.	85-115	WG602266
Selenium, Dissolved	mg/l	.05	0.0464	92.8	85-115	WG602266

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
Ethane	mg/l	0.675	0.705	105.	70-130	4.41	25	WG601549
Ethene	mg/l	0.650	0.678	102.	70-130	4.17	25	WG601549
Methane	mg/l	0.345	0.361	102.	70-130	4.61	25	WG601549
1,1,1,2-Tetrachloroethane	mg/l	0.0273	0.0285	109.	77-128	4.32	20	WG601474
1,1,1-Trichloroethane	mg/l	0.0304	0.0292	122.	71-126	4.05	20	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0270	0.0281	108.	78-130	3.92	20	WG601474
1,1,2-Trichloroethane	mg/l	0.0274	0.0277	110.	81-121	0.790	20	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0322	0.0313	129.	53-143	2.89	20	WG601474
1,1-Dichloroethane	mg/l	0.0285	0.0279	114.	73-123	2.24	20	WG601474
1,1-Dichloroethene	mg/l	0.0301	0.0294	120.	54-134	2.20	20	WG601474
1,1-Dichloropropene	mg/l	0.0294	0.0278	118.	67-127	5.61	20	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0274	0.0265	110.	77-130	3.57	20	WG601474
1,2,3-Trichloropropane	mg/l	0.0300	0.0309	120.	68-130	2.71	20	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0273	0.0264	109.	77-126	3.64	20	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0276	0.0266	110.	76-127	3.84	20	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0293	114.	77-129	2.58	20	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0254	106.	55-142	3.89	20	WG601474
1,2-Dibromoethane	mg/l	0.0282	0.0289	113.	78-124	2.33	20	WG601474
1,2-Dichlorobenzene	mg/l	0.0262	0.0257	105.	82-121	2.03	20	WG601474
1,2-Dichloroethane	mg/l	0.0300	0.0288	120.	69-128	4.14	20	WG601474
1,2-Dichloropropane	mg/l	0.0283	0.0280	113.	77-121	0.890	20	WG601474

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
1,3,5-Trimethylbenzene	mg/l	0.0279	0.0293	112.		78-127	5.03	20	WG601474
1,3-Dichlorobenzene	mg/l	0.0264	0.0282	106.		77-127	6.49	20	WG601474
1,3-Dichloropropane	mg/l	0.0278	0.0281	111.		78-117	0.770	20	WG601474
1,4-Dichlorobenzene	mg/l	0.0265	0.0258	106.		79-117	2.64	20	WG601474
2,2-Dichloropropane	mg/l	0.0275	0.0262	110.		63-130	4.95	20	WG601474
2-Butanone (MEK)	mg/l	0.151	0.147	121.		58-144	2.69	20	WG601474
2-Chloroethyl vinyl ether	mg/l	0.131	0.114	105.		26-172	14.4	22	WG601474
2-Chlorotoluene	mg/l	0.0284	0.0279	114.		78-123	1.69	20	WG601474
4-Chlorotoluene	mg/l	0.0278	0.0286	111.		78-122	2.54	20	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.146	0.147	117.		58-147	0.750	20	WG601474
Acetone	mg/l	0.156	0.151	124.		49-153	3.12	21	WG601474
Acrolein	mg/l	0.125	0.126	100.		10-181	1.00	30	WG601474
Acrylonitrile	mg/l	0.143	0.144	115.		53-153	0.300	20	WG601474
Benzene	mg/l	0.0269	0.0259	108.		72-119	3.81	20	WG601474
Bromobenzene	mg/l	0.0275	0.0280	110.		76-121	1.64	20	WG601474
Bromodichloromethane	mg/l	0.0281	0.0274	112.		75-127	2.69	20	WG601474
Bromoform	mg/l	0.0270	0.0276	108.		61-136	2.22	20	WG601474
Bromomethane	mg/l	0.0332	0.0317	133.		42-172	4.55	20	WG601474
Carbon tetrachloride	mg/l	0.0308	0.0300	123.		63-129	2.57	20	WG601474
Chlorobenzene	mg/l	0.0269	0.0281	107.		78-123	4.33	20	WG601474
Chlorodibromomethane	mg/l	0.0273	0.0277	109.		73-128	1.51	20	WG601474
Chloroethane	mg/l	0.0305	0.0299	122.		52-164	1.71	20	WG601474
Chloroform	mg/l	0.0282	0.0278	113.		76-122	1.44	20	WG601474
Chloromethane	mg/l	0.0279	0.0276	112.		50-141	1.22	20	WG601474
cis-1,2-Dichloroethene	mg/l	0.0285	0.0283	114.		75-121	0.500	20	WG601474
cis-1,3-Dichloropropene	mg/l	0.0285	0.0276	114.		74-124	3.32	20	WG601474
Di-isopropyl ether	mg/l	0.0285	0.0277	114.		66-129	3.07	20	WG601474
Dibromomethane	mg/l	0.0292	0.0277	117.		77-124	5.35	20	WG601474
Dichlorodifluoromethane	mg/l	0.0337	0.0330	135.		33-173	1.91	20	WG601474
Ethylbenzene	mg/l	0.0272	0.0280	109.		77-124	2.83	20	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0280	0.0271	112.		71-134	3.39	20	WG601474
Isopropylbenzene	mg/l	0.0273	0.0286	109.		74-126	4.70	20	WG601474
Methyl tert-butyl ether	mg/l	0.0300	0.0303	120.		67-127	1.10	20	WG601474
Methylene Chloride	mg/l	0.0281	0.0278	112.		67-122	1.11	20	WG601474
n-Butylbenzene	mg/l	0.0278	0.0267	111.		74-130	3.90	20	WG601474
n-Propylbenzene	mg/l	0.0272	0.0279	109.		77-125	2.39	20	WG601474
Naphthalene	mg/l	0.0277	0.0268	111.		70-134	3.29	20	WG601474
p-Isopropyltoluene	mg/l	0.0280	0.0298	112.		77-132	5.96	20	WG601474
sec-Butylbenzene	mg/l	0.0279	0.0292	111.		77-130	4.72	20	WG601474
Styrene	mg/l	0.0262	0.0268	105.		69-145	2.28	20	WG601474
tert-Butylbenzene	mg/l	0.0282	0.0295	113.		76-131	4.46	20	WG601474
Tetrachloroethene	mg/l	0.0264	0.0272	106.		69-131	2.89	20	WG601474
Toluene	mg/l	0.0278	0.0273	111.		75-114	1.56	20	WG601474
trans-1,2-Dichloroethene	mg/l	0.0288	0.0284	115.		63-127	1.43	20	WG601474
trans-1,3-Dichloropropene	mg/l	0.0290	0.0272	116.		69-124	6.55	20	WG601474
Trichloroethene	mg/l	0.0281	0.0272	112.		69-131	3.07	20	WG601474
Trichlorofluoromethane	mg/l	0.0137	0.0140	55.0		53-161	2.28	20	WG601474
Vinyl chloride	mg/l	0.0290	0.0282	116.		55-142	2.93	20	WG601474
Xylenes, Total	mg/l	0.0814	0.0849	108.		77-123	4.14	20	WG601474
4-Bromofluorobenzene				104.9		82-120			WG601474
Dibromofluoromethane				103.3		82-126			WG601474
Toluene-d8				104.7		92-112			WG601474
Bromide	mg/l	40.6	41.3	102.		90-110	1.71	20	WG601502
Chloride	mg/l	40.2	40.0	100.		90-110	0.499	20	WG601502
Fluoride	mg/l	8.15	8.12	102.		90-110	0.369	20	WG601502

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.18	6.37	112.		70-124	3.01	20	WG601602
a,a,a-Trifluorotoluene(FID)				108.6		62-128			WG601602
pH	su	5.70	5.71	100.		98-101	0.175	20	WG601565
Sulfate	mg/l	39.7	39.7	99.0		90-110	0	20	WG601787
Alkalinity	mg/l	97.4	95.7	97.0		85-115	1.76	20	WG601754
TOC (Total Organic Carbon)	mg/l	76.5	77.2	102.		85-115	1.01	20	WG601789
Dissolved Solids	mg/l	8670	8730	98.0		85-115	0.690	20	WG601740
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00564	53.0		18-130	6.06	32	WG601533
2,4,6-Trichlorophenol	mg/l	0.00713	0.00700	71.0		12-147	1.80	40	WG601533
2,4-Dichlorophenol	mg/l	0.00708	0.00748	71.0		10-157	5.50	40	WG601533
2,4-Dimethylphenol	mg/l	0.00527	0.00799	53.0		19-160	41.1*	40	WG601533
2,4-Dinitrophenol	mg/l	0.00704	0.00682	70.0		10-135	3.24	40	WG601533
2,4-Dinitrotoluene	mg/l	0.00641	0.00661	64.0		30-168	3.10	32	WG601533
2,6-Dinitrotoluene	mg/l	0.00671	0.00666	67.0		32-163	0.674	30	WG601533
2-Chloronaphthalene	mg/l	0.00714	0.00797	71.0		29-149	11.0	34	WG601533
2-Chlorophenol	mg/l	0.00611	0.00598	61.0		16-129	2.15	40	WG601533
2-Nitrophenol	mg/l	0.00724	0.00714	72.0		14-158	1.40	40	WG601533
3,3-Dichlorobenzidine	mg/l	0.00723	0.00746	72.0		42-150	3.12	29	WG601533
4,6-Dinitro-2-methylphenol	mg/l	0.00836	0.00750	84.0		10-164	10.9	40	WG601533
4-Bromophenyl-phenylether	mg/l	0.00799	0.00874	80.0		40-166	8.98	36	WG601533
4-Chloro-3-methylphenol	mg/l	0.00740	0.00762	74.0		14-158	2.95	40	WG601533
4-Chlorophenyl-phenylether	mg/l	0.00796	0.00868	80.0		39-155	8.66	33	WG601533
4-Nitrophenol	mg/l	0.00121	0.00100	12.0		10-61	18.7	40	WG601533
Acenaphthene	mg/l	0.00838	0.00885	84.0		37-159	5.40	30	WG601533
Acenaphthylene	mg/l	0.00737	0.00788	74.0		34-162	6.66	31	WG601533
Anthracene	mg/l	0.00840	0.00871	84.0		48-167	3.66	26	WG601533
Benzidine	mg/l	0.00206	0.00254	20.0		10-86	20.9	40	WG601533
Benzo(a)anthracene	mg/l	0.00877	0.00921	88.0		46-167	4.91	29	WG601533
Benzo(a)pyrene	mg/l	0.00821	0.00878	82.0		39-167	6.78	29	WG601533
Benzo(b)fluoranthene	mg/l	0.00844	0.00891	84.0		39-173	5.35	32	WG601533
Benzo(g,h,i)perylene	mg/l	0.00856	0.00891	86.0		42-181	4.04	30	WG601533
Benzo(k)fluoranthene	mg/l	0.00898	0.00955	90.0		42-178	6.14	33	WG601533
Benzylbutyl phthalate	mg/l	0.00969	0.0101	97.0		10-178	4.49	40	WG601533
Bis(2-chlorethoxy)methane	mg/l	0.00810	0.00863	81.0		34-155	6.26	31	WG601533
Bis(2-chloroethyl)ether	mg/l	0.00673	0.00693	67.0		22-149	2.89	38	WG601533
Bis(2-chloroisopropyl)ether	mg/l	0.00679	0.00720	68.0		26-149	5.88	34	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	0.0107	0.0116	107.		42-191	8.39	33	WG601533
Chrysene	mg/l	0.00950	0.00966	95.0		46-170	1.60	30	WG601533
Di-n-butyl phthalate	mg/l	0.00974	0.0100	97.0		33-175	2.99	39	WG601533
Di-n-octyl phthalate	mg/l	0.00923	0.00937	92.0		40-170	1.56	28	WG601533
Dibenz(a,h)anthracene	mg/l	0.00841	0.00881	84.0		43-187	4.61	31	WG601533
Diethyl phthalate	mg/l	0.0103	0.0103	103.		10-182	0.456	35	WG601533
Dimethyl phthalate	mg/l	0.00982	0.00998	98.0		10-165	1.60	37	WG601533
Fluoranthene	mg/l	0.00880	0.00930	88.0		46-171	5.61	37	WG601533
Fluorene	mg/l	0.00839	0.00890	84.0		39-163	5.90	36	WG601533
Hexachloro-1,3-butadiene	mg/l	0.00504	0.00560	50.0		18-136	10.5	30	WG601533
Hexachlorobenzene	mg/l	0.00814	0.00859	81.0		38-163	5.37	35	WG601533

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L583596

July 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hexachlorocyclopentadiene	mg/l	0.00346	0.00412	35.0	10-142	17.4	40	WG601533
Hexachloroethane	mg/l	0.00455	0.00459	45.0	10-130	0.935	39	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	0.00829	0.00879	83.0	42-184	5.95	32	WG601533
Isophorone	mg/l	0.00894	0.00883	89.0	36-166	1.30	35	WG601533
n-Nitrosodi-n-propylamine	mg/l	0.00788	0.00802	79.0	27-157	1.66	31	WG601533
n-Nitrosodimethylamine	mg/l	0.00748	0.00658	75.0	10-96	12.9	36	WG601533
n-Nitrosodiphenylamine	mg/l	0.00862	0.00892	86.0	41-168	3.35	37	WG601533
Naphthalene	mg/l	0.00689	0.00732	69.0	26-147	6.13	31	WG601533
Nitrobenzene	mg/l	0.00756	0.00747	76.0	22-154	1.23	37	WG601533
Pentachlorophenol	mg/l	0.00498	0.00568	50.0	10-128	13.1	40	WG601533
Phenanthrene	mg/l	0.00893	0.00932	89.0	46-163	4.24	29	WG601533
Phenol	mg/l	0.00276	0.00307	28.0	10-69	10.4	40	WG601533
Pyrene	mg/l	0.0103	0.0109	103.	45-176	5.30	28	WG601533
2,4,6-Tribromophenol				82.16	16-147			WG601533
2-Fluorobiphenyl				84.65	29-127			WG601533
2-Fluorophenol				38.24	10-75			WG601533
Nitrobenzene-d5				78.51	17-119			WG601533
Phenol-d5				26.91	10-63			WG601533
p-Terphenyl-d14				95.38	40-174			WG601533
TPH (GC/FID) High Fraction	ppm	1.80	1.80	120.	50-150	0	20	WG601857
o-Terphenyl				107.1	50-150			WG601857
Barium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Boron,Dissolved	mg/l	1.02	0.997	102.	85-115	2.28	20	WG602246
Calcium,Dissolved	mg/l	10.8	10.5	108.	85-115	2.82	20	WG602246
Chromium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Cobalt,Dissolved	mg/l	1.06	1.04	106.	85-115	1.90	20	WG602246
Copper,Dissolved	mg/l	1.03	1.00	103.	85-115	2.96	20	WG602246
Iron,Dissolved	mg/l	1.14	1.10	114.	85-115	3.57	20	WG602246
Magnesium,Dissolved	mg/l	11.0	10.7	110.	85-115	2.76	20	WG602246
Manganese,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Nickel,Dissolved	mg/l	1.07	1.04	107.	85-115	2.84	20	WG602246
Potassium,Dissolved	mg/l	10.3	9.81	103.	85-115	4.87	20	WG602246
Silicon,Dissolved	mg/l	1.13	1.10	113.	85-115	2.69	20	WG602246
Sodium,Dissolved	mg/l	10.7	10.4	107.	85-115	2.84	20	WG602246
Strontium,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Vanadium,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Zinc,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Specific Conductance	umhos/	504.	504.	102.	85-115	0	20	WG602349

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0283	0	.025	113.	71-130	L83526-03	WG601474
1,1,1-Trichloroethane	mg/l	0.0338	0	.025	135.	58-137	L83526-03	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0278	0	.025	111.	64-149	L83526-03	WG601474
1,1,2-Trichloroethane	mg/l	0.0267	0	.025	107.	73-128	L83526-03	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0376	0	.025	150.	36-159	L83526-03	WG601474
1,1-Dichloroethane	mg/l	0.0298	0	.025	119.	58-133	L83526-03	WG601474
1,1-Dichloroethene	mg/l	0.0335	0	.025	134.	32-152	L83526-03	WG601474
1,1-Dichloropropene	mg/l	0.0325	0	.025	130.	50-140	L83526-03	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0270	0	.025	108.	68-135	L83526-03	WG601474
1,2,3-Trichloropropane	mg/l	0.0297	0	.025	119.	74-137	L83526-03	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0283	0	.025	113.	67-133	L83526-03	WG601474

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4-Trichlorobenzene	mg/l	0.0280	0	.025	112.	67-133	L83526-03	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0299	0	.025	119.	62-141	L83526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0250	0	.025	99.8	55-148	L83526-03	WG601474
1,2-Dibromoethane	mg/l	0.0278	0	.025	111.	71-129	L83526-03	WG601474
1,2-Dichlorobenzene	mg/l	0.0266	0	.025	106.	75-125	L83526-03	WG601474
1,2-Dichloroethane	mg/l	0.0285	0	.025	114.	59-135	L83526-03	WG601474
1,2-Dichloropropane	mg/l	0.0277	0	.025	111.	68-126	L83526-03	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0307	0	.025	123.	67-136	L83526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0284	0	.025	114.	69-131	L83526-03	WG601474
1,3-Dichloropropane	mg/l	0.0275	0	.025	110.	70-122	L83526-03	WG601474
1,4-Dichlorobenzene	mg/l	0.0276	0	.025	110.	70-123	L83526-03	WG601474
2,2-Dichloropropane	mg/l	0.0314	0	.025	126.	51-141	L83526-03	WG601474
2-Butanone (MEK)	mg/l	0.110	0	.125	88.0	51-149	L83526-03	WG601474
2-Chloroethyl vinyl ether	mg/l	0.0426	0	.125	34.1	10-161	L83526-03	WG601474
2-Chlorotoluene	mg/l	0.0284	0	.025	114.	65-133	L83526-03	WG601474
4-Chlorotoluene	mg/l	0.0297	0	.025	119.	67-129	L83526-03	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.140	0	.125	112.	53-154	L83526-03	WG601474
Acetone	mg/l	0.0871	0	.125	69.6	34-146	L83526-03	WG601474
Acrolein	mg/l	0.107	0	.125	85.4	10-189	L83526-03	WG601474
Acrylonitrile	mg/l	0.146	0	.125	117.	49-162	L83526-03	WG601474
Benzene	mg/l	0.0282	0	.025	113.	51-134	L83526-03	WG601474
Bromobenzene	mg/l	0.0282	0	.025	113.	64-130	L83526-03	WG601474
Bromodichloromethane	mg/l	0.0277	0	.025	111.	67-132	L83526-03	WG601474
Bromoform	mg/l	0.0261	0	.025	104.	59-137	L83526-03	WG601474
Bromomethane	mg/l	0.0327	0	.025	131.	23-177	L83526-03	WG601474
Carbon tetrachloride	mg/l	0.0350	0	.025	140.	49-140	L83526-03	WG601474
Chlorobenzene	mg/l	0.0281	0	.025	113.	69-126	L83526-03	WG601474
Chlorodibromomethane	mg/l	0.0270	0	.025	108.	68-130	L83526-03	WG601474
Chloroethane	mg/l	0.0332	0	.025	133.	32-177	L83526-03	WG601474
Chloroform	mg/l	0.0290	0	.025	116.	64-130	L83526-03	WG601474
Chloromethane	mg/l	0.0291	0	.025	116.	27-155	L83526-03	WG601474
cis-1,2-Dichloroethene	mg/l	0.0290	0	.025	116.	54-137	L83526-03	WG601474
cis-1,3-Dichloropropene	mg/l	0.0274	0	.025	109.	63-127	L83526-03	WG601474
Di-isopropyl ether	mg/l	0.0288	0	.025	115.	58-133	L83526-03	WG601474
Dibromomethane	mg/l	0.0271	0	.025	108.	68-131	L83526-03	WG601474
Dichlorodifluoromethane	mg/l	0.0382	0	.025	153.	16-188	L83526-03	WG601474
Ethylbenzene	mg/l	0.0297	0	.025	119.	64-135	L83526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0298	0	.025	119.	64-140	L83526-03	WG601474
Isopropylbenzene	mg/l	0.0305	0	.025	122.	62-134	L83526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0297	0	.025	119.	55-136	L83526-03	WG601474
Methylene Chloride	mg/l	0.0284	0	.025	114.	52-130	L83526-03	WG601474
n-Butylbenzene	mg/l	0.0305	0	.025	122.	62-142	L83526-03	WG601474
n-Propylbenzene	mg/l	0.0307	0	.025	123.	62-137	L83526-03	WG601474
Naphthalene	mg/l	0.0268	0	.025	107.	65-140	L83526-03	WG601474
p-Isopropyltoluene	mg/l	0.0320	0	.025	128.	64-142	L83526-03	WG601474
sec-Butylbenzene	mg/l	0.0316	0	.025	126.	67-139	L83526-03	WG601474
Styrene	mg/l	0.0271	0	.025	108.	58-152	L83526-03	WG601474
tert-Butylbenzene	mg/l	0.0310	0	.025	124.	66-139	L83526-03	WG601474
Tetrachloroethene	mg/l	0.0292	0	.025	117.	56-139	L83526-03	WG601474
Toluene	mg/l	0.0287	0	.025	115.	61-126	L83526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0314	0	.025	126.	45-137	L83526-03	WG601474
trans-1,3-Dichloropropene	mg/l	0.0268	0	.025	107.	59-130	L83526-03	WG601474
Trichloroethene	mg/l	0.0290	0	.025	116.	40-155	L83526-03	WG601474
Trichlorofluoromethane	mg/l	0.0182	0	.025	72.8	35-177	L83526-03	WG601474
Vinyl chloride	mg/l	0.0318	0	.025	127.	32-159	L83526-03	WG601474
Xylenes, Total	mg/l	0.0886	0	.075	118.	64-133	L83526-03	WG601474
4-Bromofluorobenzene					109.0	82-120		WG601474
Dibromofluoromethane					104.0	82-126		WG601474
Toluene-d8					102.9	92-112		WG601474

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Fluoride	mg/l	5.30	0	5	106.	80-120	L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.23	0	5.5	113.*	55-109	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)					108.4	62-128		WG601602
Sulfate	mg/l	213.	120.	50	93.0	80-120	L583595-01	WG601787
Alkalinity	mg/l	345.	280.	100	65.0*	80-120	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	55.3	3.40	50	104.	80-120	L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00260	0	.003	86.7	70-130	L583595-01	WG602022
Antimony,Dissolved	mg/l	0.0587	0.00180	.05	114.	75-125	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0960	0.0520	.05	88.0	75-125	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0598	0.0121	.05	95.4	75-125	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.88	1.90	.01	0*	75-125	L584127-02	WG602266

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0264		2.64*	71-130	*	20		WG601474
1,1,1-Trichloroethane	mg/l	0.0326		3.26*	58-137	*	20		WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0274		2.74*	64-149	*	20		WG601474
1,1,2-Trichloroethane	mg/l	0.0267		2.67*	73-128	*	20		WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0362		3.62*	36-159	*	21		WG601474
1,1-Dichloroethane	mg/l	0.0293		2.93*	58-133	*	20		WG601474
1,1-Dichloroethene	mg/l	0.0322		3.22*	32-152	*	20		WG601474
1,1-Dichloropropene	mg/l	0.0313		3.13*	50-140	*	20		WG601474
1,2,3-Trichlorobenzene	mg/l	0.0268		2.68*	68-135	*	20		WG601474
1,2,3-Trichloropropane	mg/l	0.0292		2.92*	74-137	*	20		WG601474
1,2,3-Trimethylbenzene	mg/l	0.0268		2.68*	67-133	*	20		WG601474
1,2,4-Trichlorobenzene	mg/l	0.0275		2.75*	67-133	*	20		WG601474
1,2,4-Trimethylbenzene	mg/l	0.0287	0.0299	115.	62-141	3.84	20	L83526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0270		2.70*	55-148	*	22		WG601474
1,2-Dibromoethane	mg/l	0.0273		2.73*	71-129	*	20		WG601474
1,2-Dichlorobenzene	mg/l	0.0260		2.60*	75-125	*	20		WG601474
1,2-Dichloroethane	mg/l	0.0290		2.90*	59-135	*	20		WG601474
1,2-Dichloropropane	mg/l	0.0284		2.84*	68-126	*	20		WG601474
1,3,5-Trimethylbenzene	mg/l	0.0286	0.0307	114.	67-136	6.84	20	L83526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0267		2.67*	69-131	*	20		WG601474
1,3-Dichloropropane	mg/l	0.0273		2.72*	70-122	*	20		WG601474
1,4-Dichlorobenzene	mg/l	0.0258		2.58*	70-123	*	20		WG601474
2,2-Dichloropropane	mg/l	0.0304		3.04*	51-141	*	20		WG601474
2-Butanone (MEK)	mg/l	0.118		11.8*	51-149	*	22		WG601474
2-Chloroethyl vinyl ether	mg/l	0.00592		0.592*	10-161	*	40		WG601474
2-Chlorotoluene	mg/l	0.0282		2.82*	65-133	*	20		WG601474
4-Chlorotoluene	mg/l	0.0276		2.76*	67-129	*	20		WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.148		14.8*	53-154	*	21		WG601474
Acetone	mg/l	0.0929		9.29*	34-146	*	22		WG601474
Acrolein	mg/l	0.103		10.3	10-189	*	30		WG601474
Acrylonitrile	mg/l	0.151		15.0*	49-162	*	20		WG601474
Benzene	mg/l	0.0273	0.0282	109.	51-134	3.17	20	L83526-03	WG601474

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Bromobenzene	mg/l	0.0268		2.68*	64-130	*	20			WG601474
Bromodichloromethane	mg/l	0.0277		2.77*	67-132	*	20			WG601474
Bromoform	mg/l	0.0256		2.56*	59-137	*	20			WG601474
Bromomethane	mg/l	0.0336		3.36*	23-177	*	21			WG601474
Carbon tetrachloride	mg/l	0.0337		3.37*	49-140	*	20			WG601474
Chlorobenzene	mg/l	0.0262		2.62*	69-126	*	20			WG601474
Chlorodibromomethane	mg/l	0.0266		2.66*	68-130	*	20			WG601474
Chloroethane	mg/l	0.0326		3.26*	32-177	*	21			WG601474
Chloroform	mg/l	0.0288		2.88*	64-130	*	20			WG601474
Chloromethane	mg/l	0.0291		2.91*	27-155	*	20			WG601474
cis-1,2-Dichloroethene	mg/l	0.0283		2.83*	54-137	*	20			WG601474
cis-1,3-Dichloropropene	mg/l	0.0275		2.75*	63-127	*	20			WG601474
Di-isopropyl ether	mg/l	0.0292		2.92*	58-133	*	20			WG601474
Dibromomethane	mg/l	0.0281		2.81*	68-131	*	20			WG601474
Dichlorodifluoromethane	mg/l	0.0367		3.67*	16-188	*	22			WG601474
Ethylbenzene	mg/l	0.0273	0.0297	109.	64-135	8.20	20		L83526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0294		2.94*	64-140	*	20			WG601474
Isopropylbenzene	mg/l	0.0284	0.0305	114.	62-134	7.20	20		L83526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0301	0.0297	120.	55-136	1.37	20		L83526-03	WG601474
Methylene Chloride	mg/l	0.0277		2.77*	52-130	*	20			WG601474
n-Butylbenzene	mg/l	0.0302		3.02*	62-142	*	20			WG601474
n-Propylbenzene	mg/l	0.0289		2.89*	62-137	*	20			WG601474
Naphthalene	mg/l	0.0275	0.0268	110.	65-140	2.73	20		L83526-03	WG601474
p-Isopropyltoluene	mg/l	0.0302		3.02*	64-142	*	20			WG601474
sec-Butylbenzene	mg/l	0.0293		2.93*	67-139	*	20			WG601474
Styrene	mg/l	0.0264		2.64*	58-152	*	20			WG601474
tert-Butylbenzene	mg/l	0.0290		2.90*	66-139	*	20			WG601474
Tetrachloroethene	mg/l	0.0278		2.78*	56-139	*	20			WG601474
Toluene	mg/l	0.0283	0.0287	113.	61-126	1.34	20		L83526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0296		2.96*	45-137	*	20			WG601474
trans-1,3-Dichloropropene	mg/l	0.0279		2.79*	59-130	*	20			WG601474
Trichloroethene	mg/l	0.0285		2.85*	40-155	*	20			WG601474
Trichlorofluoromethane	mg/l	0.0364		3.64*	35-177	*	23			WG601474
Vinyl chloride	mg/l	0.0316		3.16*	32-159	*	21			WG601474
Xylenes, Total	mg/l	0.0832	0.0886	111.	64-133	6.28	20		L83526-03	WG601474
4-Bromofluorobenzene				106.3	82-120					WG601474
Dibromofluoromethane				105.4	82-126					WG601474
Toluene-d8				104.2	92-112					WG601474
Fluoride	mg/l	5.14	5.30	103.	80-120	3.07	20		L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.19	6.23	112.*	55-109	0.680	20		L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)				108.7	62-128					WG601602
Sulfate	mg/l	209.	213.	89.0	80-120	1.90	20		L583595-01	WG601787
Alkalinity	mg/l	346.	345.	66.0*	80-120	0.289	20		L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	53.3	55.3	99.9	80-120	3.63	20		L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00259	0.00260	86.3	70-130	0.385	30		L583595-01	WG602022

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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

July 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Antimony,Dissolved	mg/l	0.0634	0.0587	123.	75-125	7.70	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.104	0.0960	104.	75-125	8.00	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0642	0.0598	104.	75-125	7.10	20	L584127-02	WG602266
Selenium,Dissolved	mg/l	2.03	1.88	260.*	75-125	7.67	20	L584127-02	WG602266

Batch number /Run number / Sample number cross reference

WG601549: R2243273: L583596-01  
WG601474: R2243555: L583596-01  
WG601502: R2244754: L583596-01  
WG601602: R2245433: L583596-01  
WG601565: R2246534: L583596-01  
WG601787: R2246933: L583596-01  
WG601533: R2247133: L583596-01  
WG601754: R2247593: L583596-01  
WG601755: R2247613: L583596-01  
WG601756: R2247633: L583596-01  
WG601789: R2248876: L583596-01  
WG601740: R2249833: L583596-01  
WG601857: R2250554: L583596-01  
WG602022: R2253155: L583596-01  
WG602246: R2253894: L583596-01  
WG602349: R2254375: L583596-01  
WG602266: R2255453: L583596-01  
WG602746: R2256917: L583596-01

\* \* 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.'



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July 16, 2012

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.

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO  
81505

Alternate billing information:

Report to:

Aaron Stacy

Email to:

astacy@oaconsulting.com

Analysis/Container/Preservative

G017

in of Custody  
ge 1 of 2

Prepared by:

 ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Road  
Mt. Juliet, TN 37122

Phone (615) 758-5858

Phone (800) 767-5859

FAX (615) 758-5859

Project Description: F12E Polyline Release

City/State Collected: Silt, CO

Phone: 970.263.7800  
FAX:

Client Project #: F12E Poly Release

ESC Key:

Collected by: Aaron Stacy

Site/Facility ID#: F12E

P.O.#:

Collected by (signature):

**Rush?** ( Lab MUST Be Notified )

Date Results Needed:

No.  
of  
Cntrs

Same Day.....200%  
Next Day.....100%  
Two Day.....50%  
Three Day.....25%

Email? ☐ No ☒ Yes

FAX? ☒ No ☐ Yes

Packed on Ice N ☒

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant

Sample # (lab only)

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK, ALKB, ALKCA-500ml No Pres.	DISS METALS-500ml No Pres.	GRO-40ml HCl	DRO-40ml HCl	RSK175-40ml No Pres.	SAR-500ml HNO3 62	TOC-250ml HCl 62	VOC 8260-40ml HCl	Remarks/Contaminant	Sample # (lab only)
SCHEWW-070512	Grab	GW	x	07/05/12	1120	131	x	x	x	x	x	x	x	x		L583596-01

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

pH Temp

Remarks: DISS Metals 200.7 - Ba, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, S, V, Zn  
DISS Metals 200.8 - Sb, As, Mo, Se - plus Hg

Flow Other

Relinquished by: (Signature)	Date: 07/05/12	Time: 1700	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.20°C	Bottles Received: 17
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7-6-12	Time: 900

5040 0629 4934





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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585015

Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	100	20.	mg/l	9056	07/17/12	20
Fluoride	1.9	0.10	mg/l	9056	07/14/12	1
Sulfate	1200	100	mg/l	9056	07/17/12	20
Alkalinity	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	8.1		su	9040C	07/17/12	1
Specific Conductance	3000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0054	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.021	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.010	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	34.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	0.023	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.039	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	2.3	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	3.5	0.20	mg/l	200.7	07/20/12	1
Sodium,Dissolved	660	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	1.3	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	101.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	80.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c



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

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	38.1		% Rec.	8270 C	07/18/12	1
Phenol-d5	31.9		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	72.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	80.2		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	53.7		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	82.1		% Rec.	8270 C	07/18/12	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.

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Reported: 07/29/12 12:29 Printed: 07/29/12 12:30

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585015-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:08

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585015-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/19





YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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(615) 758-5858  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG602990	07/17/12 06:44
Sulfate	< 5	mg/l			WG602990	07/17/12 06:44
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Chloride	mg/l	100.	100.	0.995	20	L585015-01	WG602990
Sulfate	mg/l	1200	1200	1.68	20	L585015-01	WG602990
Sulfate	mg/l	1800	1800	0.557	20	L585249-01	WG602990
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Lithium,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	0	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	0	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	0	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	0	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	0	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582

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		Known Val	Result			
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812

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		Known Val	Result			
Chloride	mg/l	40	40.0	100.	90-110	WG602990
Sulfate	mg/l	40	38.8	97.0	90-110	WG602990
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benizidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743

\* Performance of this Analyte is outside of established criteria.

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Aaron Stacy (Olsson)  
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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Alkalinity	mg/l	110.	110.	110.	85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582

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Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.		78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.		81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.		53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0		73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.		54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.		67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.		77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.		68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.		77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.		76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.		77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0		55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.		78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.		77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.		77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.		69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.		76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.		69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.		75-114	9.16	20	WG602582

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July 29, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
Chloride	mg/l	39.9	40.0	100.	90-110	0.250	20	WG602990
Sulfate	mg/l	39.3	38.8	98.0	90-110	1.28	20	WG602990
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582

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Quality Assurance Report  
Level II

L585015

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812

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Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		%Rec	Limit	RPD	Limit	Ref Samp	Batch
			Ref							
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20		L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128					WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20		L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20		L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20		L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20		L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20		L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21		L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20		L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20		L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20		L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20		L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20		L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20		L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20		L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20		L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22		L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20		L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20		L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20		L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20		L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20		L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20		L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20		L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20		L584961-16	WG602582

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Quality Assurance Report  
Level II

L585015

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16		WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16		WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16		WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16		WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16		WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16		WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16		WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16		WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16		WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16		WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16		WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16		WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16		WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16		WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16		WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16		WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16		WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16		WG602582
4-Bromofluorobenzene				104.2	82-120					WG602582
Dibromofluoromethane				104.6	82-126					WG602582
Toluene-d8				105.1	92-112					WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01		WG602812
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02		WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12		WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12		WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12		WG603226

\* Performance of this Analyte is outside of established criteria.

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



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Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

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Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585015-01  
WG602670: R2256613: L585015-01  
WG602614: R2257834: L585015-01  
WG602809: R2257935: L585015-01  
WG602912: R2257953: L585015-01  
WG602917: R2257954: L585015-01  
WG602582: R2258253: L585015-01  
WG603037: R2258613: L585015-01  
WG602929: R2259213: L585015-01  
WG602812: R2260755: L585015-01  
WG602990: R2260993: L585015-01  
WG602923: R2261115: L585015-01  
WG603320: R2261675: L585015-01  
WG602743: R2262494: L585015-01  
WG603124: R2264154: L585015-01  
WG603226: R2264474: L585015-01  
WG604526: R2276876: L585015-01

\* \* 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**

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July 29, 2012

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.



<b>Company Name/Address</b>  <b>Olsson Associates</b>  <b>826 21 1/2 Road</b> <b>Grand Junction, CO 81505</b>				<b>Alternate Billing</b> Encana Oil & Gas (USA) Inc. 2717 Cr. 215 Suite 100 Parachute, Co 81635  ATTN Charles Jensen				<b>Analysis/Container/Preservative</b>				Chain of Custody Page <u>1</u> of <u>2</u>			
				Report to: Aaron Stacy E-mail to: astacy@oaconsulting.com				<div style="float: right; text-align: right;"> <b>E210</b>           Prepared by:   <b>ENVIRONMENTAL SCIENCE CORP</b>           12065 Lebanon Road          Mt. Juliet TN 37122           Phone (615)758-5858          Phone (800) 767-5859          FAX (615)758-5859       </div>							
				Project Description: F12 Poly Release											
				PHONE: 970-263-7800 FAX:											
Client Project No. F12 Poly Release		Lab Project # <b>ENCRCO</b>		ALK / ALKBI / ALKCA - 500ml HDPE No Pres Dissolved Metals - 500ml HDPE No Pres GRO - (2) 40ml amb HCl DRO - (2) 40ml amb HCl RSK175 - (2) 40ml amb No Pres TOC - 250ml amb HCl <b>L2</b> V8260 - (3) 40ml amb HCl SVOC8270 - (2) 100ml amb No Pres				CoCode (lab use only) <b>ENCRCO</b>							
Collected by: <b>Aaron Stacy</b>		Site/Facility ID# <b>SCHE1WW</b>						P.O.#		Template/Prelogin					
Collected by (signature):		Rush? (Lab MUST be Notified) Same Day.....200% Next Day.....100% Two Day.....50%						Date Results Needed Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes		Shipped Via: Denver Service Center					
Packed on Ice <input checked="" type="checkbox"/>															
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs							Remarks/contaminant	Sample # (lab only)	
SCHE1WW-090512	Grab	GW		09/05/12	1050	17	X	X	X	X	X	X	X	L595515-01	L595515-01/N

Matrix: SS=Soil/Solid GW=Groundwater WW=Wastewater DW=Drinking Water OT= Other \_\_\_\_\_

Remarks: Metals 200.7: Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn, Co

5040 0635 5583<sup>pH</sup> \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Metals 200.8: Sb, As Mo, Se. Plus Hg

Relinquisher by: (Signature)	Date: 09/05/12	Time: 1515	Received by: (Signature)	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other _____		Condition <b>JF</b> (lab use only)
Relinquisher by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.8	Bottles Received: 17	
Relinquisher by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-6-12	Time: 0900	
				pH Checked: <b>L2</b>	NCF:	



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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Monday July 16, 2012

Report Number: L583594


Samples Received: 07/06/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release  
Sample ID : GUTHWW-070512  
Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:00

ESC Sample # : L583594-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/07/12	1
Chloride	75.	1.0	mg/l	9056	07/07/12	1
Fluoride	0.47	0.10	mg/l	9056	07/07/12	1
Sulfate	1200	100	mg/l	9056	07/10/12	20
Alkalinity	450	100	mg/l	2320B	07/10/12	5
Alkalinity,Bicarbonate	450	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/10/12	1
Methane	BDL	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	7.3		su	9040C	07/09/12	1
Specific Conductance	3000		umhos/cm	9050A	07/13/12	1
TOC (Total Organic Carbon)	9.7	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	2700	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Arsenic,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Molybdenum,Dissolved	0.0039	0.0020	mg/l	200.8	07/13/12	1
Selenium,Dissolved	0.0084	0.0010	mg/l	200.8	07/13/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/12/12	1
Boron,Dissolved	0.29	0.20	mg/l	200.7	07/12/12	1
Calcium,Dissolved	280	0.50	mg/l	200.7	07/12/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Copper,Dissolved	0.035	0.020	mg/l	200.7	07/12/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/12/12	1
Lithium,Dissolved	0.052	0.015	mg/l	200.7	07/12/12	1
Magnesium,Dissolved	160	0.10	mg/l	200.7	07/12/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/12/12	1
Potassium,Dissolved	6.2	0.50	mg/l	200.7	07/12/12	1
Silicon,Dissolved	6.5	0.20	mg/l	200.7	07/12/12	1
Sodium,Dissolved	260	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	6.5	0.010	mg/l	200.7	07/12/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583594-01 (PH) - 7.3@17.5c



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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release  
Sample ID : GUTHWW-070512  
Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:00

ESC Sample # : L583594-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	0.065	0.030	mg/l	200.7	07/12/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.9		% Rec.	8015D/GRO	07/08/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	07/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583594-01 (PH) - 7.3@17.5c



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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release  
Sample ID : GUTHWW-070512  
Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:00

ESC Sample # : L583594-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/06/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	07/06/12	1
Dibromofluoromethane	109.		% Rec.	8260B	07/06/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	07/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	102.		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583594-01 (PH) - 7.3@17.5c



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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

ESC Sample # : L583594-01

Sample ID : GUTHWW-070512

Site ID : F12E

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:00

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583594-01 (PH) - 7.3@17.5c



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release  
Sample ID : GUTHWW-070512  
Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:00

ESC Sample # : L583594-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	35.0		% Rec.	8270 C	07/10/12	1
Phenol-d5	26.3		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	83.1		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	93.5		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	71.2		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	97.3		% Rec.	8270 C	07/10/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/15/12 12:27 Revised: 07/16/12 11:16  
L583594-01 (PH) - 7.3@17.5c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L583594-01	WG601565	SAMP	pH	R2246534	T8
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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.



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Est. 1970

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG601549	07/07/12 13:38
Ethene	< .013	mg/l			WG601549	07/07/12 13:38
Methane	< .01	mg/l			WG601549	07/07/12 13:38
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,1-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG601474	07/06/12 20:10
1,2-Dibromoethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,3,5-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,4-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
2,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
2-Butanone (MEK)	< .01	mg/l			WG601474	07/06/12 20:10
2-Chloroethyl vinyl ether	< .05	mg/l			WG601474	07/06/12 20:10
2-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG601474	07/06/12 20:10
Acetone	< .05	mg/l			WG601474	07/06/12 20:10
Acrolein	< .025	mg/l			WG601474	07/06/12 20:10
Acrylonitrile	< .01	mg/l			WG601474	07/06/12 20:10
Benzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromodichloromethane	< .001	mg/l			WG601474	07/06/12 20:10
Bromoform	< .001	mg/l			WG601474	07/06/12 20:10
Bromomethane	< .005	mg/l			WG601474	07/06/12 20:10
Carbon tetrachloride	< .001	mg/l			WG601474	07/06/12 20:10
Chlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Chlorodibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Chloroethane	< .005	mg/l			WG601474	07/06/12 20:10
Chloroform	< .005	mg/l			WG601474	07/06/12 20:10
Chloromethane	< .0025	mg/l			WG601474	07/06/12 20:10
cis-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
cis-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Di-isopropyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Dibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Dichlorodifluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Ethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Hexachloro-1,3-butadiene	< .001	mg/l			WG601474	07/06/12 20:10
Isopropylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Methyl tert-butyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Methylene Chloride	< .005	mg/l			WG601474	07/06/12 20:10
n-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
n-Propylbenzene	< .001	mg/l			WG601474	07/06/12 20:10

\* Performance of this Analyte is outside of established criteria.

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



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Est. 1970

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG601474	07/06/12 20:10
p-Isopropyltoluene	< .001	mg/l			WG601474	07/06/12 20:10
sec-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Styrene	< .001	mg/l			WG601474	07/06/12 20:10
tert-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Tetrachloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Toluene	< .005	mg/l			WG601474	07/06/12 20:10
trans-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
trans-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Trichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Trichlorofluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Vinyl chloride	< .001	mg/l			WG601474	07/06/12 20:10
Xylenes, Total	< .003	mg/l			WG601474	07/06/12 20:10
4-Bromofluorobenzene		% Rec.	109.6	82-120	WG601474	07/06/12 20:10
Dibromofluoromethane		% Rec.	106.0	82-126	WG601474	07/06/12 20:10
Toluene-d8		% Rec.	103.7	92-112	WG601474	07/06/12 20:10
Bromide	< 1	mg/l			WG601502	07/07/12 06:56
Chloride	< 1	mg/l			WG601502	07/07/12 06:56
Fluoride	< .1	mg/l			WG601502	07/07/12 06:56
TPH (GC/FID) Low Fraction	< .1	mg/l			WG601602	07/08/12 17:47
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	62-128	WG601602	07/08/12 17:47
pH	4.28	su			WG601565	07/09/12 14:31
Alkalinity	< 20	mg/l			WG601754	07/10/12 07:30
TOC (Total Organic Carbon)	< 1	mg/l			WG601789	07/10/12 15:33
Sulfate	< 5	mg/l			WG601864	07/10/12 08:49
Dissolved Solids	< 10	mg/l			WG601740	07/11/12 14:44
1,2,4-Trichlorobenzene	< .01	mg/l			WG601533	07/10/12 19:34
2,4,6-Trichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dimethylphenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2,6-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2-Chloronaphthalene	< .001	mg/l			WG601533	07/10/12 19:34
2-Chlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
3,3-Dichlorobenzidine	< .01	mg/l			WG601533	07/10/12 19:34
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Bromophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Chloro-3-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Chlorophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
Acenaphthene	< .001	mg/l			WG601533	07/10/12 19:34

\* Performance of this Analyte is outside of established criteria.

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



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Est. 1970

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthylene	< .001	mg/l			WG601533	07/10/12 19:34
Anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzidine	< .01	mg/l			WG601533	07/10/12 19:34
Benzo(a)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(a)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(b)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(g,h,i)perylene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(k)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzylbutyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroethoxy)methane	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroethyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Chrysene	< .001	mg/l			WG601533	07/10/12 19:34
Di-n-butyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Di-n-octyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dibenz(a,h)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Diethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dimethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Fluorene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachloro-1,3-butadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachlorobenzene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachlorocyclopentadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachloroethane	< .01	mg/l			WG601533	07/10/12 19:34
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Isophorone	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodi-n-propylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodimethylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodiphenylamine	< .01	mg/l			WG601533	07/10/12 19:34
Naphthalene	< .001	mg/l			WG601533	07/10/12 19:34
Nitrobenzene	< .01	mg/l			WG601533	07/10/12 19:34
Pentachlorophenol	< .001	mg/l			WG601533	07/10/12 19:34
Phenanthrene	< .001	mg/l			WG601533	07/10/12 19:34
Phenol	< .01	mg/l			WG601533	07/10/12 19:34
Pyrene	< .001	mg/l			WG601533	07/10/12 19:34
2,4,6-Tribromophenol		% Rec.	79.49	16-147	WG601533	07/10/12 19:34
2-Fluorobiphenyl		% Rec.	89.38	29-127	WG601533	07/10/12 19:34
2-Fluorophenol		% Rec.	45.06	10-75	WG601533	07/10/12 19:34
Nitrobenzene-d5		% Rec.	82.43	17-119	WG601533	07/10/12 19:34
Phenol-d5		% Rec.	32.67	10-63	WG601533	07/10/12 19:34
p-Terphenyl-d14		% Rec.	93.01	40-174	WG601533	07/10/12 19:34
TPH (GC/FID) High Fraction	< .1	ppm			WG601857	07/11/12 22:42
o-Terphenyl		% Rec.	105.6	50-150	WG601857	07/11/12 22:42
Barium,Dissolved	< .005	mg/l			WG601999	07/12/12 10:12
Boron,Dissolved	< .2	mg/l			WG601999	07/12/12 10:12
Calcium,Dissolved	< .5	mg/l			WG601999	07/12/12 10:12
Chromium,Dissolved	< .01	mg/l			WG601999	07/12/12 10:12
Cobalt,Dissolved	< .01	mg/l			WG601999	07/12/12 10:12
Copper,Dissolved	< .02	mg/l			WG601999	07/12/12 10:12
Iron,Dissolved	< .1	mg/l			WG601999	07/12/12 10:12
Lithium,Dissolved	< .015	mg/l			WG601999	07/12/12 10:12
Magnesium,Dissolved	< .1	mg/l			WG601999	07/12/12 10:12
Manganese,Dissolved	< .01	mg/l			WG601999	07/12/12 10:12
Nickel,Dissolved	< .02	mg/l			WG601999	07/12/12 10:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Potassium,Dissolved	< .5	mg/l			WG601999	07/12/12 10:12
Silicon,Dissolved	< .2	mg/l			WG601999	07/12/12 10:12
Strontium,Dissolved	< .01	mg/l			WG601999	07/12/12 10:12
Vanadium,Dissolved	< .01	mg/l			WG601999	07/12/12 10:12
Zinc,Dissolved	< .03	mg/l			WG601999	07/12/12 10:12
Mercury,Dissolved	< .0002	mg/l			WG601422	07/12/12 10:09
Sodium,Dissolved	< .5	mg/l			WG601999	07/13/12 11:29
Specific Conductance	1.42	umhos/cm			WG602349	07/13/12 14:32
Antimony,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Arsenic,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Molybdenum,Dissolved	< .002	mg/l			WG602266	07/13/12 19:17
Selenium,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	16.0	17.0	2.99	20		L583531-01	WG601502
Chloride	mg/l	0	0	0	20		L583531-02	WG601502
pH	su	7.80	7.80	0.385	1		L583500-02	WG601565
pH	su	8.40	8.40	0.357	1		L583831-10	WG601565
Alkalinity	mg/l	280.	280.	1.77	20		L583651-01	WG601754
Alkalinity	mg/l	590.	600.	1.34	20		L583819-04	WG601754
TOC (Total Organic Carbon)	mg/l	270.	260.	3.33	20		L582994-04	WG601789
TOC (Total Organic Carbon)	mg/l	210.	220.	4.22	20		L583672-01	WG601789
Sulfate	mg/l	1400	1200	15.4	20		L583594-01	WG601864
Sulfate	mg/l	530.	550.	3.52	20		L583582-01	WG601864
Sulfate	mg/l	300.	320.	7.12	20		L583804-02	WG601864
Sulfate	mg/l	100.	100.	1.98	20		L583537-03	WG601864
Sulfate	mg/l	1000	1000	2.96	20		L583582-02	WG601864
Sulfate	mg/l	480.	480.	0.416	20		L583804-03	WG601864
Dissolved Solids	mg/l	15.0	15.0	0	5		L583641-05	WG601740
Barium,Dissolved	mg/l	0.0540	0.0520	2.84	20		L583507-01	WG601999
Boron,Dissolved	mg/l	0	0.150	NA	0		L583507-01	WG601999
Calcium,Dissolved	mg/l	44.0	43.0	2.30	20		L583507-01	WG601999
Chromium,Dissolved	mg/l	0	0.00110	NA	20		L583507-01	WG601999
Cobalt,Dissolved	mg/l	0	0.00110	NA	20		L583507-01	WG601999
Copper,Dissolved	mg/l	0	0.00160	NA	20		L583507-01	WG601999
Iron,Dissolved	mg/l	0	0	0	20		L583507-01	WG601999
Lithium,Dissolved	mg/l	0	0.00352	NA	20		L583507-01	WG601999

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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Magnesium,Dissolved	mg/l	12.0	12.0	4.08	20	L583507-01	WG601999
Manganese,Dissolved	mg/l	0	0	0	20	L583507-01	WG601999
Nickel,Dissolved	mg/l	0	0	0	20	L583507-01	WG601999
Potassium,Dissolved	mg/l	1.80	2.08	17.2	20	L583507-01	WG601999
Silicon,Dissolved	mg/l	2.40	2.34	0.426*	0	L583507-01	WG601999
Strontium,Dissolved	mg/l	0.190	0.188	2.11	20	L583507-01	WG601999
Vanadium,Dissolved	mg/l	0	0.00770	NA	20	L583507-01	WG601999
Zinc,Dissolved	mg/l	0	0.00570	NA	20	L583507-01	WG601999
Mercury,Dissolved	mg/l	0	0	0	20	L583582-01	WG601422
Sodium,Dissolved	mg/l	6.70	7.50	11.9	20	L583507-01	WG601999
Specific Conductance	umhos/cm	5.10	5.00	1.39	20	L583454-02	WG602349
Specific Conductance	umhos/cm	6000	6100	1.15	20	L584342-01	WG602349
Antimony,Dissolved	mg/l	0.00160	0.00180	9.91	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0460	0.0520	12.0	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0120	0.0121	5.08*	0	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.80	1.90	5.41	20	L584127-02	WG602266

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Ethane	mg/l	.645	0.705	109.	70-130	WG601549
Ethene	mg/l	.635	0.678	107.	70-130	WG601549
Methane	mg/l	.339	0.361	107.	70-130	WG601549
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0285	114.	77-128	WG601474
1,1,1-Trichloroethane	mg/l	.025	0.0292	117.	71-126	WG601474
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0281	112.	78-130	WG601474
1,1,2-Trichloroethane	mg/l	.025	0.0277	111.	81-121	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0313	125.	53-143	WG601474
1,1-Dichloroethane	mg/l	.025	0.0279	111.	73-123	WG601474
1,1-Dichloroethene	mg/l	.025	0.0294	118.	54-134	WG601474
1,1-Dichloropropene	mg/l	.025	0.0278	111.	67-127	WG601474
1,2,3-Trichlorobenzene	mg/l	.025	0.0265	106.	77-130	WG601474
1,2,3-Trichloropropane	mg/l	.025	0.0309	123.	68-130	WG601474
1,2,3-Trimethylbenzene	mg/l	.025	0.0264	105.	77-126	WG601474
1,2,4-Trichlorobenzene	mg/l	.025	0.0266	106.	76-127	WG601474
1,2,4-Trimethylbenzene	mg/l	.025	0.0293	117.	77-129	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0254	102.	55-142	WG601474
1,2-Dibromoethane	mg/l	.025	0.0289	116.	78-124	WG601474
1,2-Dichlorobenzene	mg/l	.025	0.0257	103.	82-121	WG601474
1,2-Dichloroethane	mg/l	.025	0.0288	115.	69-128	WG601474
1,2-Dichloropropane	mg/l	.025	0.0280	112.	77-121	WG601474
1,3,5-Trimethylbenzene	mg/l	.025	0.0293	117.	78-127	WG601474
1,3-Dichlorobenzene	mg/l	.025	0.0282	113.	77-127	WG601474
1,3-Dichloropropane	mg/l	.025	0.0281	112.	78-117	WG601474
1,4-Dichlorobenzene	mg/l	.025	0.0258	103.	79-117	WG601474
2,2-Dichloropropane	mg/l	.025	0.0262	105.	63-130	WG601474
2-Butanone (MEK)	mg/l	.125	0.147	118.	58-144	WG601474
2-Chloroethyl vinyl ether	mg/l	.125	0.114	90.9	26-172	WG601474
2-Chlorotoluene	mg/l	.025	0.0279	112.	78-123	WG601474

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
4-Chlorotoluene	mg/l	.025	0.0286	114.	78-122	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.147	118.	58-147	WG601474
Acetone	mg/l	.125	0.151	121.	49-153	WG601474
Acrolein	mg/l	.125	0.126	101.	10-181	WG601474
Acrylonitrile	mg/l	.125	0.144	115.	53-153	WG601474
Benzene	mg/l	.025	0.0259	104.	72-119	WG601474
Bromobenzene	mg/l	.025	0.0280	112.	76-121	WG601474
Bromodichloromethane	mg/l	.025	0.0274	109.	75-127	WG601474
Bromoform	mg/l	.025	0.0276	110.	61-136	WG601474
Bromomethane	mg/l	.025	0.0317	127.	42-172	WG601474
Carbon tetrachloride	mg/l	.025	0.0300	120.	63-129	WG601474
Chlorobenzene	mg/l	.025	0.0281	112.	78-123	WG601474
Chlorodibromomethane	mg/l	.025	0.0277	111.	73-128	WG601474
Chloroethane	mg/l	.025	0.0299	120.	52-164	WG601474
Chloroform	mg/l	.025	0.0278	111.	76-122	WG601474
Chloromethane	mg/l	.025	0.0276	110.	50-141	WG601474
cis-1,2-Dichloroethene	mg/l	.025	0.0283	113.	75-121	WG601474
cis-1,3-Dichloropropene	mg/l	.025	0.0276	110.	74-124	WG601474
Di-isopropyl ether	mg/l	.025	0.0277	111.	66-129	WG601474
Dibromomethane	mg/l	.025	0.0277	111.	77-124	WG601474
Dichlorodifluoromethane	mg/l	.025	0.0330	132.	33-173	WG601474
Ethylbenzene	mg/l	.025	0.0280	112.	77-124	WG601474
Hexachloro-1,3-butadiene	mg/l	.025	0.0271	108.	71-134	WG601474
Isopropylbenzene	mg/l	.025	0.0286	115.	74-126	WG601474
Methyl tert-butyl ether	mg/l	.025	0.0303	121.	67-127	WG601474
Methylene Chloride	mg/l	.025	0.0278	111.	67-122	WG601474
n-Butylbenzene	mg/l	.025	0.0267	107.	74-130	WG601474
n-Propylbenzene	mg/l	.025	0.0279	112.	77-125	WG601474
Naphthalene	mg/l	.025	0.0268	107.	70-134	WG601474
p-Isopropyltoluene	mg/l	.025	0.0298	119.	77-132	WG601474
sec-Butylbenzene	mg/l	.025	0.0292	117.	77-130	WG601474
Styrene	mg/l	.025	0.0268	107.	69-145	WG601474
tert-Butylbenzene	mg/l	.025	0.0295	118.	76-131	WG601474
Tetrachloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Toluene	mg/l	.025	0.0273	109.	75-114	WG601474
trans-1,2-Dichloroethene	mg/l	.025	0.0284	113.	63-127	WG601474
trans-1,3-Dichloropropene	mg/l	.025	0.0272	109.	69-124	WG601474
Trichloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Trichlorofluoromethane	mg/l	.025	0.0140	56.0	53-161	WG601474
Vinyl chloride	mg/l	.025	0.0282	113.	55-142	WG601474
Xylenes, Total	mg/l	.075	0.0849	113.	77-123	WG601474
4-Bromofluorobenzene				109.2	82-120	WG601474
Dibromofluoromethane				102.0	82-126	WG601474
Toluene-d8				102.7	92-112	WG601474
Bromide	mg/l	40	41.3	103.	90-110	WG601502
Chloride	mg/l	40	40.0	100.	90-110	WG601502
Fluoride	mg/l	8	8.12	102.	90-110	WG601502
TPH (GC/FID) Low Fraction	mg/l	5.5	6.37	116.	70-124	WG601602
a,a,a-Trifluorotoluene(FID)				109.0	62-128	WG601602
pH	su	5.7	5.71	100.	98-101	WG601565
Alkalinity	mg/l	100	95.7	95.7	85-115	WG601754

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TOC (Total Organic Carbon)	mg/l	75	77.2	103.	85-115	WG601789
Sulfate	mg/l	40	39.6	99.0	90-110	WG601864
Dissolved Solids	mg/l	8800	8730	99.2	85-115	WG601740
1,2,4-Trichlorobenzene	mg/l	.01	0.00564	56.4	18-130	WG601533
2,4,6-Trichlorophenol	mg/l	.01	0.00700	70.0	12-147	WG601533
2,4-Dichlorophenol	mg/l	.01	0.00748	74.8	10-157	WG601533
2,4-Dimethylphenol	mg/l	.01	0.00799	79.9	19-160	WG601533
2,4-Dinitrophenol	mg/l	.01	0.00682	68.2	10-135	WG601533
2,4-Dinitrotoluene	mg/l	.01	0.00661	66.1	30-168	WG601533
2,6-Dinitrotoluene	mg/l	.01	0.00666	66.6	32-163	WG601533
2-Chloronaphthalene	mg/l	.01	0.00797	79.7	29-149	WG601533
2-Chlorophenol	mg/l	.01	0.00598	59.8	16-129	WG601533
2-Nitrophenol	mg/l	.01	0.00714	71.4	14-158	WG601533
3,3-Dichlorobenzidine	mg/l	.01	0.00746	74.6	42-150	WG601533
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00750	75.0	10-164	WG601533
4-Bromophenyl-phenylether	mg/l	.01	0.00874	87.4	40-166	WG601533
4-Chloro-3-methylphenol	mg/l	.01	0.00762	76.2	14-158	WG601533
4-Chlorophenyl-phenylether	mg/l	.01	0.00868	86.8	39-155	WG601533
4-Nitrophenol	mg/l	.01	0.00100	10.0	10-61	WG601533
Acenaphthene	mg/l	.01	0.00885	88.5	37-159	WG601533
Acenaphthylene	mg/l	.01	0.00788	78.8	34-162	WG601533
Anthracene	mg/l	.01	0.00871	87.1	48-167	WG601533
Benzidine	mg/l	.01	0.00254	25.4	10-86	WG601533
Benzo(a)anthracene	mg/l	.01	0.00921	92.1	46-167	WG601533
Benzo(a)pyrene	mg/l	.01	0.00878	87.8	39-167	WG601533
Benzo(b)fluoranthene	mg/l	.01	0.00891	89.1	39-173	WG601533
Benzo(g,h,i)perylene	mg/l	.01	0.00891	89.1	42-181	WG601533
Benzo(k)fluoranthene	mg/l	.01	0.00955	95.5	42-178	WG601533
Benzylbutyl phthalate	mg/l	.01	0.0101	101.	10-178	WG601533
Bis(2-chlorethoxy)methane	mg/l	.01	0.00863	86.3	34-155	WG601533
Bis(2-chloroethyl)ether	mg/l	.01	0.00693	69.3	22-149	WG601533
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00720	72.0	26-149	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0116	116.	42-191	WG601533
Chrysene	mg/l	.01	0.00966	96.6	46-170	WG601533
Di-n-butyl phthalate	mg/l	.01	0.0100	100.	33-175	WG601533
Di-n-octyl phthalate	mg/l	.01	0.00937	93.7	40-170	WG601533
Dibenz(a,h)anthracene	mg/l	.01	0.00881	88.1	43-187	WG601533
Diethyl phthalate	mg/l	.01	0.0103	103.	10-182	WG601533
Dimethyl phthalate	mg/l	.01	0.00998	99.8	10-165	WG601533
Fluoranthene	mg/l	.01	0.00930	93.0	46-171	WG601533
Fluorene	mg/l	.01	0.00890	89.0	39-163	WG601533
Hexachloro-1,3-butadiene	mg/l	.01	0.00560	56.0	18-136	WG601533
Hexachlorobenzene	mg/l	.01	0.00859	85.9	38-163	WG601533
Hexachlorocyclopentadiene	mg/l	.01	0.00412	41.2	10-142	WG601533
Hexachloroethane	mg/l	.01	0.00459	45.9	10-130	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00879	87.9	42-184	WG601533
Isophorone	mg/l	.01	0.00883	88.3	36-166	WG601533
n-Nitrosodi-n-propylamine	mg/l	.01	0.00802	80.2	27-157	WG601533
n-Nitrosodimethylamine	mg/l	.01	0.00658	65.8	10-96	WG601533
n-Nitrosodiphenylamine	mg/l	.01	0.00892	89.2	41-168	WG601533
Naphthalene	mg/l	.01	0.00732	73.2	26-147	WG601533
Nitrobenzene	mg/l	.01	0.00747	74.7	22-154	WG601533
Pentachlorophenol	mg/l	.01	0.00568	56.8	10-128	WG601533

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Quality Assurance Report  
Level II

L583594

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

July 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Phenanthrene	mg/l	.01	0.00932	93.2	46-163	WG601533
Phenol	mg/l	.01	0.00307	30.7	10-69	WG601533
Pyrene	mg/l	.01	0.0109	109.	45-176	WG601533
2,4,6-Tribromophenol				84.23	16-147	WG601533
2-Fluorobiphenyl				92.72	29-127	WG601533
2-Fluorophenol				37.92	10-75	WG601533
Nitrobenzene-d5				80.68	17-119	WG601533
Phenol-d5				28.85	10-63	WG601533
p-Terphenyl-d14				98.23	40-174	WG601533
TPH (GC/FID) High Fraction	ppm	1.5	1.80	120.	50-150	WG601857
o-Terphenyl				109.9	50-150	WG601857
Barium,Dissolved	mg/l	1	1.03	103.	85-115	WG601999
Boron,Dissolved	mg/l	1	0.924	92.4	85-115	WG601999
Calcium,Dissolved	mg/l	10	10.2	102.	85-115	WG601999
Chromium,Dissolved	mg/l	1	1.02	102.	85-115	WG601999
Cobalt,Dissolved	mg/l	1	1.00	100.	85-115	WG601999
Copper,Dissolved	mg/l	1	1.01	101.	85-115	WG601999
Iron,Dissolved	mg/l	1	1.09	109.	85-115	WG601999
Lithium,Dissolved	mg/l	.5	0.537	107.	85-115	WG601999
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG601999
Manganese,Dissolved	mg/l	1	1.04	104.	85-115	WG601999
Nickel,Dissolved	mg/l	1	1.06	106.	85-115	WG601999
Potassium,Dissolved	mg/l	10	9.98	99.8	85-115	WG601999
Silicon,Dissolved	mg/l	1	1.10	110.	85-115	WG601999
Strontium,Dissolved	mg/l	1	1.02	102.	85-115	WG601999
Vanadium,Dissolved	mg/l	1	1.02	102.	85-115	WG601999
Zinc,Dissolved	mg/l	1	1.00	100.	85-115	WG601999
Mercury,Dissolved	mg/l	.003	0.00306	102.	85-115	WG601422
Sodium,Dissolved	mg/l	10	10.7	107.	85-115	WG601999
Specific Conductance	umhos/cm	495	504.	102.	85-115	WG602349
Antimony,Dissolved	mg/l	.05	0.0531	106.	85-115	WG602266
Arsenic,Dissolved	mg/l	.05	0.0495	99.0	85-115	WG602266
Molybdenum,Dissolved	mg/l	.05	0.0513	103.	85-115	WG602266
Selenium,Dissolved	mg/l	.05	0.0464	92.8	85-115	WG602266

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.675	0.705	105.	70-130	4.41	25	WG601549
Ethene	mg/l	0.650	0.678	102.	70-130	4.17	25	WG601549
Methane	mg/l	0.345	0.361	102.	70-130	4.61	25	WG601549
1,1,1,2-Tetrachloroethane	mg/l	0.0273	0.0285	109.	77-128	4.32	20	WG601474
1,1,1-Trichloroethane	mg/l	0.0304	0.0292	122.	71-126	4.05	20	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0270	0.0281	108.	78-130	3.92	20	WG601474
1,1,2-Trichloroethane	mg/l	0.0274	0.0277	110.	81-121	0.790	20	WG601474

\* Performance of this Analyte is outside of established criteria.

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



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July 16, 2012

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		Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0322	0.0313	129.	53-143	2.89	20	WG601474
1,1-Dichloroethane	mg/l	0.0285	0.0279	114.	73-123	2.24	20	WG601474
1,1-Dichloroethene	mg/l	0.0301	0.0294	120.	54-134	2.20	20	WG601474
1,1-Dichloropropene	mg/l	0.0294	0.0278	118.	67-127	5.61	20	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0274	0.0265	110.	77-130	3.57	20	WG601474
1,2,3-Trichloropropane	mg/l	0.0300	0.0309	120.	68-130	2.71	20	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0273	0.0264	109.	77-126	3.64	20	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0276	0.0266	110.	76-127	3.84	20	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0293	114.	77-129	2.58	20	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0254	106.	55-142	3.89	20	WG601474
1,2-Dibromoethane	mg/l	0.0282	0.0289	113.	78-124	2.33	20	WG601474
1,2-Dichlorobenzene	mg/l	0.0262	0.0257	105.	82-121	2.03	20	WG601474
1,2-Dichloroethane	mg/l	0.0300	0.0288	120.	69-128	4.14	20	WG601474
1,2-Dichloropropane	mg/l	0.0283	0.0280	113.	77-121	0.890	20	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0279	0.0293	112.	78-127	5.03	20	WG601474
1,3-Dichlorobenzene	mg/l	0.0264	0.0282	106.	77-127	6.49	20	WG601474
1,3-Dichloropropane	mg/l	0.0278	0.0281	111.	78-117	0.770	20	WG601474
1,4-Dichlorobenzene	mg/l	0.0265	0.0258	106.	79-117	2.64	20	WG601474
2,2-Dichloropropane	mg/l	0.0275	0.0262	110.	63-130	4.95	20	WG601474
2-Butanone (MEK)	mg/l	0.151	0.147	121.	58-144	2.69	20	WG601474
2-Chloroethyl vinyl ether	mg/l	0.131	0.114	105.	26-172	14.4	22	WG601474
2-Chlorotoluene	mg/l	0.0284	0.0279	114.	78-123	1.69	20	WG601474
4-Chlorotoluene	mg/l	0.0278	0.0286	111.	78-122	2.54	20	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.146	0.147	117.	58-147	0.750	20	WG601474
Acetone	mg/l	0.156	0.151	124.	49-153	3.12	21	WG601474
Acrolein	mg/l	0.125	0.126	100.	10-181	1.00	30	WG601474
Acrylonitrile	mg/l	0.143	0.144	115.	53-153	0.300	20	WG601474
Benzene	mg/l	0.0269	0.0259	108.	72-119	3.81	20	WG601474
Bromobenzene	mg/l	0.0275	0.0280	110.	76-121	1.64	20	WG601474
Bromodichloromethane	mg/l	0.0281	0.0274	112.	75-127	2.69	20	WG601474
Bromoform	mg/l	0.0270	0.0276	108.	61-136	2.22	20	WG601474
Bromomethane	mg/l	0.0332	0.0317	133.	42-172	4.55	20	WG601474
Carbon tetrachloride	mg/l	0.0308	0.0300	123.	63-129	2.57	20	WG601474
Chlorobenzene	mg/l	0.0269	0.0281	107.	78-123	4.33	20	WG601474
Chlorodibromomethane	mg/l	0.0273	0.0277	109.	73-128	1.51	20	WG601474
Chloroethane	mg/l	0.0305	0.0299	122.	52-164	1.71	20	WG601474
Chloroform	mg/l	0.0282	0.0278	113.	76-122	1.44	20	WG601474
Chloromethane	mg/l	0.0279	0.0276	112.	50-141	1.22	20	WG601474
cis-1,2-Dichloroethene	mg/l	0.0285	0.0283	114.	75-121	0.500	20	WG601474
cis-1,3-Dichloropropene	mg/l	0.0285	0.0276	114.	74-124	3.32	20	WG601474
Di-isopropyl ether	mg/l	0.0285	0.0277	114.	66-129	3.07	20	WG601474
Dibromomethane	mg/l	0.0292	0.0277	117.	77-124	5.35	20	WG601474
Dichlorodifluoromethane	mg/l	0.0337	0.0330	135.	33-173	1.91	20	WG601474
Ethylbenzene	mg/l	0.0272	0.0280	109.	77-124	2.83	20	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0280	0.0271	112.	71-134	3.39	20	WG601474
Isopropylbenzene	mg/l	0.0273	0.0286	109.	74-126	4.70	20	WG601474
Methyl tert-butyl ether	mg/l	0.0300	0.0303	120.	67-127	1.10	20	WG601474
Methylene Chloride	mg/l	0.0281	0.0278	112.	67-122	1.11	20	WG601474
n-Butylbenzene	mg/l	0.0278	0.0267	111.	74-130	3.90	20	WG601474
n-Propylbenzene	mg/l	0.0272	0.0279	109.	77-125	2.39	20	WG601474
Naphthalene	mg/l	0.0277	0.0268	111.	70-134	3.29	20	WG601474
p-Isopropyltoluene	mg/l	0.0280	0.0298	112.	77-132	5.96	20	WG601474
sec-Butylbenzene	mg/l	0.0279	0.0292	111.	77-130	4.72	20	WG601474
Styrene	mg/l	0.0262	0.0268	105.	69-145	2.28	20	WG601474
tert-Butylbenzene	mg/l	0.0282	0.0295	113.	76-131	4.46	20	WG601474
Tetrachloroethene	mg/l	0.0264	0.0272	106.	69-131	2.89	20	WG601474
Toluene	mg/l	0.0278	0.0273	111.	75-114	1.56	20	WG601474
trans-1,2-Dichloroethene	mg/l	0.0288	0.0284	115.	63-127	1.43	20	WG601474
trans-1,3-Dichloropropene	mg/l	0.0290	0.0272	116.	69-124	6.55	20	WG601474

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Trichloroethene	mg/l	0.0281	0.0272	112.	69-131	3.07	20	WG601474
Trichlorofluoromethane	mg/l	0.0137	0.0140	55.0	53-161	2.28	20	WG601474
Vinyl chloride	mg/l	0.0290	0.0282	116.	55-142	2.93	20	WG601474
Xylenes, Total	mg/l	0.0814	0.0849	108.	77-123	4.14	20	WG601474
4-Bromofluorobenzene				104.9	82-120			WG601474
Dibromofluoromethane				103.3	82-126			WG601474
Toluene-d8				104.7	92-112			WG601474
Bromide	mg/l	40.6	41.3	102.	90-110	1.71	20	WG601502
Chloride	mg/l	40.2	40.0	100.	90-110	0.499	20	WG601502
Fluoride	mg/l	8.15	8.12	102.	90-110	0.369	20	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.18	6.37	112.	70-124	3.01	20	WG601602
a,a,a-Trifluorotoluene(FID)				108.6	62-128			WG601602
pH	su	5.70	5.71	100.	98-101	0.175	20	WG601565
Alkalinity	mg/l	97.4	95.7	97.0	85-115	1.76	20	WG601754
TOC (Total Organic Carbon)	mg/l	76.5	77.2	102.	85-115	1.01	20	WG601789
Sulfate	mg/l	39.6	39.6	99.0	90-110	0	20	WG601864
Dissolved Solids	mg/l	8670	8730	98.0	85-115	0.690	20	WG601740
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00564	53.0	18-130	6.06	32	WG601533
2,4,6-Trichlorophenol	mg/l	0.00713	0.00700	71.0	12-147	1.80	40	WG601533
2,4-Dichlorophenol	mg/l	0.00708	0.00748	71.0	10-157	5.50	40	WG601533
2,4-Dimethylphenol	mg/l	0.00527	0.00799	53.0	19-160	41.1*	40	WG601533
2,4-Dinitrophenol	mg/l	0.00704	0.00682	70.0	10-135	3.24	40	WG601533
2,4-Dinitrotoluene	mg/l	0.00641	0.00661	64.0	30-168	3.10	32	WG601533
2,6-Dinitrotoluene	mg/l	0.00671	0.00666	67.0	32-163	0.674	30	WG601533
2-Chloronaphthalene	mg/l	0.00714	0.00797	71.0	29-149	11.0	34	WG601533
2-Chlorophenol	mg/l	0.00611	0.00598	61.0	16-129	2.15	40	WG601533
2-Nitrophenol	mg/l	0.00724	0.00714	72.0	14-158	1.40	40	WG601533
3,3-Dichlorobenzidine	mg/l	0.00723	0.00746	72.0	42-150	3.12	29	WG601533
4,6-Dinitro-2-methylphenol	mg/l	0.00836	0.00750	84.0	10-164	10.9	40	WG601533
4-Bromophenyl-phenylether	mg/l	0.00799	0.00874	80.0	40-166	8.98	36	WG601533
4-Chloro-3-methylphenol	mg/l	0.00740	0.00762	74.0	14-158	2.95	40	WG601533
4-Chlorophenyl-phenylether	mg/l	0.00796	0.00868	80.0	39-155	8.66	33	WG601533
4-Nitrophenol	mg/l	0.00121	0.00100	12.0	10-61	18.7	40	WG601533
Acenaphthene	mg/l	0.00838	0.00885	84.0	37-159	5.40	30	WG601533
Acenaphthylene	mg/l	0.00737	0.00788	74.0	34-162	6.66	31	WG601533
Anthracene	mg/l	0.00840	0.00871	84.0	48-167	3.66	26	WG601533
Benzidine	mg/l	0.00206	0.00254	20.0	10-86	20.9	40	WG601533
Benzo(a)anthracene	mg/l	0.00877	0.00921	88.0	46-167	4.91	29	WG601533
Benzo(a)pyrene	mg/l	0.00821	0.00878	82.0	39-167	6.78	29	WG601533
Benzo(b)fluoranthene	mg/l	0.00844	0.00891	84.0	39-173	5.35	32	WG601533
Benzo(g,h,i)perylene	mg/l	0.00856	0.00891	86.0	42-181	4.04	30	WG601533
Benzo(k)fluoranthene	mg/l	0.00898	0.00955	90.0	42-178	6.14	33	WG601533
Benzylbutyl phthalate	mg/l	0.00969	0.0101	97.0	10-178	4.49	40	WG601533

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		Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00810	0.00863	81.0	34-155	6.26	31	WG601533
Bis(2-chloroethyl)ether	mg/l	0.00673	0.00693	67.0	22-149	2.89	38	WG601533
Bis(2-chloroisopropyl)ether	mg/l	0.00679	0.00720	68.0	26-149	5.88	34	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	0.0107	0.0116	107.	42-191	8.39	33	WG601533
Chrysene	mg/l	0.00950	0.00966	95.0	46-170	1.60	30	WG601533
Di-n-butyl phthalate	mg/l	0.00974	0.0100	97.0	33-175	2.99	39	WG601533
Di-n-octyl phthalate	mg/l	0.00923	0.00937	92.0	40-170	1.56	28	WG601533
Dibenz(a,h)anthracene	mg/l	0.00841	0.00881	84.0	43-187	4.61	31	WG601533
Diethyl phthalate	mg/l	0.0103	0.0103	103.	10-182	0.456	35	WG601533
Dimethyl phthalate	mg/l	0.00982	0.00998	98.0	10-165	1.60	37	WG601533
Fluoranthene	mg/l	0.00880	0.00930	88.0	46-171	5.61	37	WG601533
Fluorene	mg/l	0.00839	0.00890	84.0	39-163	5.90	36	WG601533
Hexachloro-1,3-butadiene	mg/l	0.00504	0.00560	50.0	18-136	10.5	30	WG601533
Hexachlorobenzene	mg/l	0.00814	0.00859	81.0	38-163	5.37	35	WG601533
Hexachlorocyclopentadiene	mg/l	0.00346	0.00412	35.0	10-142	17.4	40	WG601533
Hexachloroethane	mg/l	0.00455	0.00459	45.0	10-130	0.935	39	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	0.00829	0.00879	83.0	42-184	5.95	32	WG601533
Isophorone	mg/l	0.00894	0.00883	89.0	36-166	1.30	35	WG601533
n-Nitrosodi-n-propylamine	mg/l	0.00788	0.00802	79.0	27-157	1.66	31	WG601533
n-Nitrosodimethylamine	mg/l	0.00748	0.00658	75.0	10-96	12.9	36	WG601533
n-Nitrosodiphenylamine	mg/l	0.00862	0.00892	86.0	41-168	3.35	37	WG601533
Naphthalene	mg/l	0.00689	0.00732	69.0	26-147	6.13	31	WG601533
Nitrobenzene	mg/l	0.00756	0.00747	76.0	22-154	1.23	37	WG601533
Pentachlorophenol	mg/l	0.00498	0.00568	50.0	10-128	13.1	40	WG601533
Phenanthrene	mg/l	0.00893	0.00932	89.0	46-163	4.24	29	WG601533
Phenol	mg/l	0.00276	0.00307	28.0	10-69	10.4	40	WG601533
Pyrene	mg/l	0.0103	0.0109	103.	45-176	5.30	28	WG601533
2,4,6-Tribromophenol				82.16	16-147			WG601533
2-Fluorobiphenyl				84.65	29-127			WG601533
2-Fluorophenol				38.24	10-75			WG601533
Nitrobenzene-d5				78.51	17-119			WG601533
Phenol-d5				26.91	10-63			WG601533
p-Terphenyl-d14				95.38	40-174			WG601533
TPH (GC/FID) High Fraction	ppm	1.80	1.80	120.	50-150	0	20	WG601857
o-Terphenyl				107.1	50-150			WG601857
Specific Conductance	umhos/	504.	504.	102.	85-115	0	20	WG602349

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0283	0	.025	113.	71-130	L83526-03	WG601474
1,1,1-Trichloroethane	mg/l	0.0338	0	.025	135.	58-137	L83526-03	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0278	0	.025	111.	64-149	L83526-03	WG601474
1,1,2-Trichloroethane	mg/l	0.0267	0	.025	107.	73-128	L83526-03	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0376	0	.025	150.	36-159	L83526-03	WG601474
1,1-Dichloroethane	mg/l	0.0298	0	.025	119.	58-133	L83526-03	WG601474
1,1-Dichloroethene	mg/l	0.0335	0	.025	134.	32-152	L83526-03	WG601474
1,1-Dichloropropene	mg/l	0.0325	0	.025	130.	50-140	L83526-03	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0270	0	.025	108.	68-135	L83526-03	WG601474
1,2,3-Trichloropropane	mg/l	0.0297	0	.025	119.	74-137	L83526-03	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0283	0	.025	113.	67-133	L83526-03	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0280	0	.025	112.	67-133	L83526-03	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0299	0	.025	119.	62-141	L83526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0250	0	.025	99.8	55-148	L83526-03	WG601474
1,2-Dibromoethane	mg/l	0.0278	0	.025	111.	71-129	L83526-03	WG601474

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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583594

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

July 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dichlorobenzene	mg/l	0.0266	0	.025	106.	75-125	L83526-03	WG601474
1,2-Dichloroethane	mg/l	0.0285	0	.025	114.	59-135	L83526-03	WG601474
1,2-Dichloropropane	mg/l	0.0277	0	.025	111.	68-126	L83526-03	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0307	0	.025	123.	67-136	L83526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0284	0	.025	114.	69-131	L83526-03	WG601474
1,3-Dichloropropane	mg/l	0.0275	0	.025	110.	70-122	L83526-03	WG601474
1,4-Dichlorobenzene	mg/l	0.0276	0	.025	110.	70-123	L83526-03	WG601474
2,2-Dichloropropane	mg/l	0.0314	0	.025	126.	51-141	L83526-03	WG601474
2-Butanone (MEK)	mg/l	0.110	0	.125	88.0	51-149	L83526-03	WG601474
2-Chloroethyl vinyl ether	mg/l	0.0426	0	.125	34.1	10-161	L83526-03	WG601474
2-Chlorotoluene	mg/l	0.0284	0	.025	114.	65-133	L83526-03	WG601474
4-Chlorotoluene	mg/l	0.0297	0	.025	119.	67-129	L83526-03	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.140	0	.125	112.	53-154	L83526-03	WG601474
Acetone	mg/l	0.0871	0	.125	69.6	34-146	L83526-03	WG601474
Acrolein	mg/l	0.107	0	.125	85.4	10-189	L83526-03	WG601474
Acrylonitrile	mg/l	0.146	0	.125	117.	49-162	L83526-03	WG601474
Benzene	mg/l	0.0282	0	.025	113.	51-134	L83526-03	WG601474
Bromobenzene	mg/l	0.0282	0	.025	113.	64-130	L83526-03	WG601474
Bromodichloromethane	mg/l	0.0277	0	.025	111.	67-132	L83526-03	WG601474
Bromoform	mg/l	0.0261	0	.025	104.	59-137	L83526-03	WG601474
Bromomethane	mg/l	0.0327	0	.025	131.	23-177	L83526-03	WG601474
Carbon tetrachloride	mg/l	0.0350	0	.025	140.	49-140	L83526-03	WG601474
Chlorobenzene	mg/l	0.0281	0	.025	113.	69-126	L83526-03	WG601474
Chlorodibromomethane	mg/l	0.0270	0	.025	108.	68-130	L83526-03	WG601474
Chloroethane	mg/l	0.0332	0	.025	133.	32-177	L83526-03	WG601474
Chloroform	mg/l	0.0290	0	.025	116.	64-130	L83526-03	WG601474
Chloromethane	mg/l	0.0291	0	.025	116.	27-155	L83526-03	WG601474
cis-1,2-Dichloroethene	mg/l	0.0290	0	.025	116.	54-137	L83526-03	WG601474
cis-1,3-Dichloropropene	mg/l	0.0274	0	.025	109.	63-127	L83526-03	WG601474
Di-isopropyl ether	mg/l	0.0288	0	.025	115.	58-133	L83526-03	WG601474
Dibromomethane	mg/l	0.0271	0	.025	108.	68-131	L83526-03	WG601474
Dichlorodifluoromethane	mg/l	0.0382	0	.025	153.	16-188	L83526-03	WG601474
Ethylbenzene	mg/l	0.0297	0	.025	119.	64-135	L83526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0298	0	.025	119.	64-140	L83526-03	WG601474
Isopropylbenzene	mg/l	0.0305	0	.025	122.	62-134	L83526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0297	0	.025	119.	55-136	L83526-03	WG601474
Methylene Chloride	mg/l	0.0284	0	.025	114.	52-130	L83526-03	WG601474
n-Butylbenzene	mg/l	0.0305	0	.025	122.	62-142	L83526-03	WG601474
n-Propylbenzene	mg/l	0.0307	0	.025	123.	62-137	L83526-03	WG601474
Naphthalene	mg/l	0.0268	0	.025	107.	65-140	L83526-03	WG601474
p-Isopropyltoluene	mg/l	0.0320	0	.025	128.	64-142	L83526-03	WG601474
sec-Butylbenzene	mg/l	0.0316	0	.025	126.	67-139	L83526-03	WG601474
Styrene	mg/l	0.0271	0	.025	108.	58-152	L83526-03	WG601474
tert-Butylbenzene	mg/l	0.0310	0	.025	124.	66-139	L83526-03	WG601474
Tetrachloroethene	mg/l	0.0292	0	.025	117.	56-139	L83526-03	WG601474
Toluene	mg/l	0.0287	0	.025	115.	61-126	L83526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0314	0	.025	126.	45-137	L83526-03	WG601474
trans-1,3-Dichloropropene	mg/l	0.0268	0	.025	107.	59-130	L83526-03	WG601474
Trichloroethene	mg/l	0.0290	0	.025	116.	40-155	L83526-03	WG601474
Trichlorofluoromethane	mg/l	0.0182	0	.025	72.8	35-177	L83526-03	WG601474
Vinyl chloride	mg/l	0.0318	0	.025	127.	32-159	L83526-03	WG601474
Xylenes, Total	mg/l	0.0886	0	.075	118.	64-133	L83526-03	WG601474
4-Bromofluorobenzene					109.0	82-120		WG601474
Dibromofluoromethane					104.0	82-126		WG601474
Toluene-d8					102.9	92-112		WG601474
Fluoride	mg/l	5.30	0	5	106.	80-120	L583789-01	WG601502

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Level II

L583594

July 16, 2012

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			Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.23	0	5.5	113.*	55-109	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)					108.4	62-128		WG601602
Alkalinity	mg/l	345.	280.	100	65.0*	80-120	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	55.3	3.40	50	104.	80-120	L583352-23	WG601789
Sulfate	mg/l	74.5	26.0	50	97.0	80-120	L583999-02	WG601864
Barium,Dissolved	mg/l	1.07	0.0520	1	102.	75-125	L583507-01	WG601999
Boron,Dissolved	mg/l	1.13	0.150	1	98.0	75-125	L583507-01	WG601999
Calcium,Dissolved	mg/l	54.8	43.0	10	118.	75-125	L583507-01	WG601999
Chromium,Dissolved	mg/l	1.00	0.00110	1	99.9	75-125	L583507-01	WG601999
Cobalt,Dissolved	mg/l	0.972	0.00110	1	97.1	75-125	L583507-01	WG601999
Copper,Dissolved	mg/l	0.986	0.00160	1	98.4	75-125	L583507-01	WG601999
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L583507-01	WG601999
Lithium,Dissolved	mg/l	0.550	0.00352	.5	109.	75-125	L583507-01	WG601999
Magnesium,Dissolved	mg/l	23.0	12.0	10	110.	75-125	L583507-01	WG601999
Manganese,Dissolved	mg/l	1.02	0	1	102.	75-125	L583507-01	WG601999
Nickel,Dissolved	mg/l	1.06	0	1	106.	75-125	L583507-01	WG601999
Potassium,Dissolved	mg/l	12.2	2.08	10	101.	75-125	L583507-01	WG601999
Silicon,Dissolved	mg/l	3.52	2.34	1	118.	75-125	L583507-01	WG601999
Strontium,Dissolved	mg/l	1.25	0.188	1	106.	75-125	L583507-01	WG601999
Vanadium,Dissolved	mg/l	1.02	0.00770	1	101.	75-125	L583507-01	WG601999
Zinc,Dissolved	mg/l	0.994	0.00570	1	98.8	75-125	L583507-01	WG601999
Mercury,Dissolved	mg/l	0.00293	0	.003	97.7	70-130	L583582-01	WG601422
Sodium,Dissolved	mg/l	16.8	7.50	10	93.0	75-125	L583507-01	WG601999
Antimony,Dissolved	mg/l	0.0587	0.00180	.05	114.	75-125	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0960	0.0520	.05	88.0	75-125	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0598	0.0121	.05	95.4	75-125	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.88	1.90	.01	0*	75-125	L584127-02	WG602266

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0264		2.64*	71-130	*	20		WG601474
1,1,1-Trichloroethane	mg/l	0.0326		3.26*	58-137	*	20		WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0274		2.74*	64-149	*	20		WG601474
1,1,2-Trichloroethane	mg/l	0.0267		2.67*	73-128	*	20		WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0362		3.62*	36-159	*	21		WG601474
1,1-Dichloroethane	mg/l	0.0293		2.93*	58-133	*	20		WG601474
1,1-Dichloroethene	mg/l	0.0322		3.22*	32-152	*	20		WG601474
1,1-Dichloropropene	mg/l	0.0313		3.13*	50-140	*	20		WG601474
1,2,3-Trichlorobenzene	mg/l	0.0268		2.68*	68-135	*	20		WG601474
1,2,3-Trichloropropane	mg/l	0.0292		2.92*	74-137	*	20		WG601474
1,2,3-Trimethylbenzene	mg/l	0.0268		2.68*	67-133	*	20		WG601474
1,2,4-Trichlorobenzene	mg/l	0.0275		2.75*	67-133	*	20		WG601474
1,2,4-Trimethylbenzene	mg/l	0.0287	0.0299	115.	62-141	3.84	20	L83526-03	WG601474

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dibromo-3-Chloropropane	mg/l	0.0270		2.70*	55-148	*	22			WG601474
1,2-Dibromoethane	mg/l	0.0273		2.73*	71-129	*	20			WG601474
1,2-Dichlorobenzene	mg/l	0.0260		2.60*	75-125	*	20			WG601474
1,2-Dichloroethane	mg/l	0.0290		2.90*	59-135	*	20			WG601474
1,2-Dichloropropane	mg/l	0.0284		2.84*	68-126	*	20			WG601474
1,3,5-Trimethylbenzene	mg/l	0.0286	0.0307	114.	67-136	6.84	20	L83526-03		WG601474
1,3-Dichlorobenzene	mg/l	0.0267		2.67*	69-131	*	20			WG601474
1,3-Dichloropropane	mg/l	0.0273		2.72*	70-122	*	20			WG601474
1,4-Dichlorobenzene	mg/l	0.0258		2.58*	70-123	*	20			WG601474
2,2-Dichloropropane	mg/l	0.0304		3.04*	51-141	*	20			WG601474
2-Butanone (MEK)	mg/l	0.118		11.8*	51-149	*	22			WG601474
2-Chloroethyl vinyl ether	mg/l	0.00592		0.592*	10-161	*	40			WG601474
2-Chlorotoluene	mg/l	0.0282		2.82*	65-133	*	20			WG601474
4-Chlorotoluene	mg/l	0.0276		2.76*	67-129	*	20			WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.148		14.8*	53-154	*	21			WG601474
Acetone	mg/l	0.0929		9.29*	34-146	*	22			WG601474
Acrolein	mg/l	0.103		10.3	10-189	*	30			WG601474
Acrylonitrile	mg/l	0.151		15.0*	49-162	*	20			WG601474
Benzene	mg/l	0.0273	0.0282	109.	51-134	3.17	20	L83526-03		WG601474
Bromobenzene	mg/l	0.0268		2.68*	64-130	*	20			WG601474
Bromodichloromethane	mg/l	0.0277		2.77*	67-132	*	20			WG601474
Bromoform	mg/l	0.0256		2.56*	59-137	*	20			WG601474
Bromomethane	mg/l	0.0336		3.36*	23-177	*	21			WG601474
Carbon tetrachloride	mg/l	0.0337		3.37*	49-140	*	20			WG601474
Chlorobenzene	mg/l	0.0262		2.62*	69-126	*	20			WG601474
Chlorodibromomethane	mg/l	0.0266		2.66*	68-130	*	20			WG601474
Chloroethane	mg/l	0.0326		3.26*	32-177	*	21			WG601474
Chloroform	mg/l	0.0288		2.88*	64-130	*	20			WG601474
Chloromethane	mg/l	0.0291		2.91*	27-155	*	20			WG601474
cis-1,2-Dichloroethene	mg/l	0.0283		2.83*	54-137	*	20			WG601474
cis-1,3-Dichloropropene	mg/l	0.0275		2.75*	63-127	*	20			WG601474
Di-isopropyl ether	mg/l	0.0292		2.92*	58-133	*	20			WG601474
Dibromomethane	mg/l	0.0281		2.81*	68-131	*	20			WG601474
Dichlorodifluoromethane	mg/l	0.0367		3.67*	16-188	*	22			WG601474
Ethylbenzene	mg/l	0.0273	0.0297	109.	64-135	8.20	20	L83526-03		WG601474
Hexachloro-1,3-butadiene	mg/l	0.0294		2.94*	64-140	*	20			WG601474
Isopropylbenzene	mg/l	0.0284	0.0305	114.	62-134	7.20	20	L83526-03		WG601474
Methyl tert-butyl ether	mg/l	0.0301	0.0297	120.	55-136	1.37	20	L83526-03		WG601474
Methylene Chloride	mg/l	0.0277		2.77*	52-130	*	20			WG601474
n-Butylbenzene	mg/l	0.0302		3.02*	62-142	*	20			WG601474
n-Propylbenzene	mg/l	0.0289		2.89*	62-137	*	20			WG601474
Naphthalene	mg/l	0.0275	0.0268	110.	65-140	2.73	20	L83526-03		WG601474
p-Isopropyltoluene	mg/l	0.0302		3.02*	64-142	*	20			WG601474
sec-Butylbenzene	mg/l	0.0293		2.93*	67-139	*	20			WG601474
Styrene	mg/l	0.0264		2.64*	58-152	*	20			WG601474
tert-Butylbenzene	mg/l	0.0290		2.90*	66-139	*	20			WG601474
Tetrachloroethene	mg/l	0.0278		2.78*	56-139	*	20			WG601474
Toluene	mg/l	0.0283	0.0287	113.	61-126	1.34	20	L83526-03		WG601474
trans-1,2-Dichloroethene	mg/l	0.0296		2.96*	45-137	*	20			WG601474
trans-1,3-Dichloropropene	mg/l	0.0279		2.79*	59-130	*	20			WG601474
Trichloroethene	mg/l	0.0285		2.85*	40-155	*	20			WG601474
Trichlorofluoromethane	mg/l	0.0364		3.64*	35-177	*	23			WG601474
Vinyl chloride	mg/l	0.0316		3.16*	32-159	*	21			WG601474
Xylenes, Total	mg/l	0.0832	0.0886	111.	64-133	6.28	20	L83526-03		WG601474
4-Bromofluorobenzene				106.3	82-120					WG601474
Dibromofluoromethane				105.4	82-126					WG601474
Toluene-d8				104.2	92-112					WG601474

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			Ref	%Rec					
Fluoride	mg/l	5.14	5.30	103.	80-120	3.07	20	L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.19	6.23	112.*	55-109	0.680	20	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)				108.7	62-128				WG601602
Alkalinity	mg/l	346.	345.	66.0*	80-120	0.289	20	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	53.3	55.3	99.9	80-120	3.63	20	L583352-23	WG601789
Sulfate	mg/l	74.6	74.5	97.2	80-120	0.134	20	L583999-02	WG601864
Barium,Dissolved	mg/l	1.06	1.07	101.	75-125	0.939	20	L583507-01	WG601999
Boron,Dissolved	mg/l	1.13	1.13	98.0	75-125	0	20	L583507-01	WG601999
Calcium,Dissolved	mg/l	55.0	54.8	120.	75-125	0.364	20	L583507-01	WG601999
Chromium,Dissolved	mg/l	1.03	1.00	103.	75-125	2.96	20	L583507-01	WG601999
Cobalt,Dissolved	mg/l	0.983	0.972	98.2	75-125	1.13	20	L583507-01	WG601999
Copper,Dissolved	mg/l	0.994	0.986	99.2	75-125	0.808	20	L583507-01	WG601999
Iron,Dissolved	mg/l	1.09	1.06	109.	75-125	2.79	20	L583507-01	WG601999
Lithium,Dissolved	mg/l	0.543	0.550	108.	75-125	1.28	20	L583507-01	WG601999
Magnesium,Dissolved	mg/l	23.1	23.0	111.	75-125	0.434	20	L583507-01	WG601999
Manganese,Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L583507-01	WG601999
Nickel,Dissolved	mg/l	1.08	1.06	108.	75-125	1.87	20	L583507-01	WG601999
Potassium,Dissolved	mg/l	12.0	12.2	99.2	75-125	1.65	20	L583507-01	WG601999
Silicon,Dissolved	mg/l	3.53	3.52	119.	75-125	0.284	20	L583507-01	WG601999
Strontium,Dissolved	mg/l	1.22	1.25	103.	75-125	2.43	20	L583507-01	WG601999
Vanadium,Dissolved	mg/l	1.01	1.02	100.	75-125	0.985	20	L583507-01	WG601999
Zinc,Dissolved	mg/l	0.997	0.994	99.1	75-125	0.301	20	L583507-01	WG601999
Mercury,Dissolved	mg/l	0.00294	0.00293	98.0	70-130	0.341	30	L583582-01	WG601422
Sodium,Dissolved	mg/l	17.0	16.8	95.0	75-125	1.18	20	L583507-01	WG601999
Antimony,Dissolved	mg/l	0.0634	0.0587	123.	75-125	7.70	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.104	0.0960	104.	75-125	8.00	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0642	0.0598	104.	75-125	7.10	20	L584127-02	WG602266
Selenium,Dissolved	mg/l	2.03	1.88	260.*	75-125	7.67	20	L584127-02	WG602266

Batch number /Run number / Sample number cross reference

WG601549: R2243273: L583594-01  
WG601474: R2243555: L583594-01  
WG601502: R2244754: L583594-01  
WG601602: R2245433: L583594-01  
WG601565: R2246534: L583594-01  
WG601533: R2247133: L583594-01  
WG601754: R2247593: L583594-01  
WG601755: R2247613: L583594-01  
WG601756: R2247633: L583594-01  
WG601789: R2248876: L583594-01  
WG601864: R2248933: L583594-01

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583594

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

July 16, 2012

WG601740: R2249833: L583594-01  
WG601857: R2250554: L583594-01  
WG601999: R2252674: L583594-01  
WG601422: R2252793: L583594-01  
WG602349: R2254375: L583594-01  
WG602266: R2255453: L583594-01

\* \* 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.'



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July 16, 2012

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.

**Andy Vann**

---

**From:** Jarred Willis  
**Sent:** Monday, September 17, 2012 3:04 PM  
**To:** Login  
**Cc:** Due VOC  
**Subject:** L593525-01 - ENCRCO - relog for V8260

Please relog L593525-01 from **\*ENCRCO\*** for V8260. Relog to a new L# on standard TAT. Please rerun from a pristine vial.

Add comment in LIMS that **"VOCs go OOH on Wednesday, 9/19."**

Thanks,

**Jarred Willis**

Technical Service Representative (TSR)

E-mail: [jwillis@esclabsciences.com](mailto:jwillis@esclabsciences.com)

Phone: 800-767-5859 Ext. 9678

Direct: (615) 773-9678

[www.esclabsciences.com](http://www.esclabsciences.com)



Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO  
81505

Alternate billing information:

Report to:

Aaron Stacy

Email to:

astacy@oaconsulting.com

Analysis/Container/Pre

Chain of Custody  
Page 1 of 2

Prepared by:

 ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Road  
Mt. Juliet, TN 37122

Phone (615) 758-5858

Phone (800) 767-5859

FAX (615) 758-5859

Project Description: F12E Polyline Release City/State Collected: Silt, CO

Phone: 970.263.7800  
FAX:

Client Project #: F12E Poly Release

ESC Key:

Collected by: Aaron Stacy

Site/Facility ID#: F12E

P.O.#:

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Same Day.....200%  
Next Day.....100%  
Two Day.....50%  
Three Day.....25%

Date Results Needed:

Email? ☐ No ☒ YesFAX? ☒ No ☐ YesPacked on Ice ☒

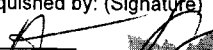







Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK, ALKBI, ALKCA-500ml No Pres.	DISS METALS-500ml No Pres.	GRO-40ml HCl	DRO-40ml HCl	RSK175-40ml No Pres.	SAR-500ml HNO3 L2	TOC-250ml HCl L2	VOC 8260-40ml HCl L	Remarks/Contaminant	Sample # (lab only)
GUTHWW-070512	Grab	GW	x	07/05/12	1200	13	x	x	x	x	x	x	x	x	1583544	

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: DISS Metals 200.7 - Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn  
DISS Metals 200.8 - Sb, As, Mo, Se - plus Hg

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) 	Date: 07/05/12	Time: 1700	Received by: (Signature) 	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only) 
Relinquished by: (Signature) 	Date:	Time:	Received by: (Signature) 	Temp: 3.50	Bottles Received: 17
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 7/6/12	Time: 0900
				pH Checked: L2	NCF: 

504006307560

-01

<b>Olsson Associates</b> 826 21 1/2 Road Grand Junction, CO 81505				Alternate billing information:				Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">SVOC 8270-100ml No Pres.</div> <div style="width: 15%;">Cl, F, NO3, NO2, pH, SO4-500ml No Pres.</div> <div style="width: 15%;">Br, Cond, TDS-250ml No Pres.</div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> </div>				Chain of Custody Page <u>2</u> of <u>2</u>							
				Report to: Aaron Stacy Email to: astacy@oaconsulting.com															
				Project Description: F12E Polyline Release				City/State Collected: Silt, CO				Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859							
Phone: 970.263.7800		Client Project #: F12E Poly Release		ESC Key:															
FAX:		Site/Facility ID#: F12E		P.O.#:															
Collected by: Aaron Stacy																			
Collected by (signature): 		<b>Rush?</b> ( Lab MUST Be Notified ) Same Day.....200% Next Day.....100% Two Day .....50% Three Day .....25%		Date Results Needed: Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		No. of Cntrs		CoCode (lab use only) Template/Prelogin Shipped Via:											
Packed on Ice N <u>Y</u>								Remarks/Contaminant      Sample # (lab only)											
Sample ID		Comp/Grab	Matrix*	Depth	Date	Time													
GUTHWW-070512		Grab	GW		07/05/12	1200	4	x	x	x									

\*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks:

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)		Date: 07/05/12	Time: 1700	Received by: (Signature)		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Condition: (lab use only)	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: 3.5° Bottles Received: 17			
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature)		Date: 7/6/12 Time: 0900		pH Checked: 12 NCF:	



12065 Lebanon Rd.  
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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Wednesday September 19, 2012

Report Number: L594224

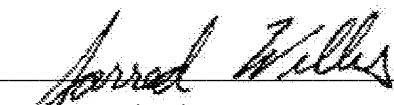
Samples Received: 09/11/12

Client Project: F12E POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/14/12	1
Chloride	74.	1.0	mg/l	9056	09/14/12	1
Fluoride	0.46	0.10	mg/l	9056	09/14/12	1
Sulfate	1500	250	mg/l	9056	09/15/12	50
Alkalinity	450	100	mg/l	2320B	09/13/12	5
Alkalinity,Bicarbonate	450	20.	mg/l	2320B	09/13/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/13/12	1
Methane	BDL	0.010	mg/l	RSK175	09/13/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/13/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/13/12	1
pH	7.5		su	9040C	09/14/12	1
Specific Conductance	3000		umhos/cm	9050A	09/16/12	1
TOC (Total Organic Carbon)	5.4	1.0	mg/l	9060A	09/13/12	1
Dissolved Solids	2600	10.	mg/l	2540C	09/18/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/17/12	1
Arsenic,Dissolved	0.0015	0.0010	mg/l	200.8	09/17/12	1
Molybdenum,Dissolved	0.0037	0.0020	mg/l	200.8	09/17/12	1
Selenium,Dissolved	0.0072	0.0010	mg/l	200.8	09/17/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/17/12	1
Barium,Dissolved	0.012	0.0050	mg/l	200.7	09/17/12	1
Boron,Dissolved	0.37	0.20	mg/l	200.7	09/17/12	1
Calcium,Dissolved	270	0.50	mg/l	200.7	09/17/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/17/12	1
Lithium,Dissolved	0.048	0.016	mg/l	200.7	09/19/12	1.1
Magnesium,Dissolved	170	0.10	mg/l	200.7	09/17/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Potassium,Dissolved	6.6	0.50	mg/l	200.7	09/17/12	1
Silicon,Dissolved	5.2	0.20	mg/l	200.7	09/17/12	1
Sodium,Dissolved	250	0.50	mg/l	200.7	09/17/12	1
Strontium,Dissolved	6.4	0.010	mg/l	200.7	09/17/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Zinc,Dissolved	0.31	0.030	mg/l	200.7	09/17/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/11/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	8015D/GRO	09/11/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	09/12/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/12/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/12/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/12/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/12/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/12/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/12/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/12/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/12/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/12/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/12/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	09/12/12	1
Dibromofluoromethane	107.		% Rec.	8260B	09/12/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	09/12/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/14/12	1
Surrogate recovery(%)						
o-Terphenyl	103.		% Rec.	3511/8015	09/14/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/16/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/16/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c



12065 Lebanon Rd.  
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(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Surrogate Recovery						
2-Fluorophenol	64.0		% Rec.	8270 C	09/16/12	1
Phenol-d5	48.6		% Rec.	8270 C	09/16/12	1
Nitrobenzene-d5	90.5		% Rec.	8270 C	09/16/12	1
2-Fluorobiphenyl	103.		% Rec.	8270 C	09/16/12	1
2,4,6-Tribromophenol	78.8		% Rec.	8270 C	09/16/12	1
p-Terphenyl-d14	109.		% Rec.	8270 C	09/16/12	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: 09/19/12 13:10 Printed: 09/19/12 13:11

L594224-01 (PH) - 7.5@18.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L594224-01	WG612480	SAMP	pH	R2346693	T8
	WG612248	SAMP	Alkalinity	R2344113	J6
	WG611956	SAMP	Acetone	R2341093	J4
	WG611956	SAMP	2-Chloroethyl vinyl ether	R2341093	J6

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/19/12 at 13:11:09

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L594224-01 Account: ENCRCO Received: 09/11/12 09:00 Due Date: 09/18/12 00:00 RPT Date: 09/19/12 13:10  
Added HGD and SIDICP. Deleted HG. Per JW. AV 9/14



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611964	09/11/12 11:58
a,a,a-Trifluorotoluene(FID)		% Rec.	99.42	62-128	WG611964	09/11/12 11:58
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,1-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611956	09/12/12 02:13
1,2-Dibromoethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,3,5-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,4-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
2,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
2-Butanone (MEK)	< .01	mg/l			WG611956	09/12/12 02:13
2-Chloroethyl vinyl ether	< .05	mg/l			WG611956	09/12/12 02:13
2-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611956	09/12/12 02:13
Acetone	< .05	mg/l			WG611956	09/12/12 02:13
Acrolein	< .025	mg/l			WG611956	09/12/12 02:13
Acrylonitrile	< .01	mg/l			WG611956	09/12/12 02:13
Benzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromodichloromethane	< .001	mg/l			WG611956	09/12/12 02:13
Bromoform	< .001	mg/l			WG611956	09/12/12 02:13
Bromomethane	< .005	mg/l			WG611956	09/12/12 02:13
Carbon tetrachloride	< .001	mg/l			WG611956	09/12/12 02:13
Chlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Chlorodibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Chloroethane	< .005	mg/l			WG611956	09/12/12 02:13
Chloroform	< .005	mg/l			WG611956	09/12/12 02:13
Chloromethane	< .0025	mg/l			WG611956	09/12/12 02:13
cis-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
cis-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Di-isopropyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Dibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Dichlorodifluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Ethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Hexachloro-1,3-butadiene	< .001	mg/l			WG611956	09/12/12 02:13
Isopropylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Methyl tert-butyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Methylene Chloride	< .005	mg/l			WG611956	09/12/12 02:13
n-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
n-Propylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Naphthalene	< .005	mg/l			WG611956	09/12/12 02:13

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
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Quality Assurance Report  
Level II

L594224

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
p-Isopropyltoluene	< .001	mg/l			WG611956	09/12/12 02:13
sec-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Styrene	< .001	mg/l			WG611956	09/12/12 02:13
tert-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Tetrachloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Toluene	< .005	mg/l			WG611956	09/12/12 02:13
trans-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
trans-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Trichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Trichlorofluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Vinyl chloride	< .001	mg/l			WG611956	09/12/12 02:13
Xylenes, Total	< .003	mg/l			WG611956	09/12/12 02:13
4-Bromofluorobenzene		% Rec.	99.13	82-120	WG611956	09/12/12 02:13
Dibromofluoromethane		% Rec.	104.3	82-126	WG611956	09/12/12 02:13
Toluene-d8		% Rec.	103.7	92-112	WG611956	09/12/12 02:13
Mercury	< .0002	mg/l			WG611975	09/12/12 11:29
Ethane	< .013	mg/l			WG612418	09/13/12 13:12
Ethene	< .013	mg/l			WG612418	09/13/12 13:12
Methane	< .01	mg/l			WG612418	09/13/12 13:12
Alkalinity	< 20	mg/l			WG612248	09/13/12 10:21
TOC (Total Organic Carbon)	< 1	mg/l			WG612253	09/13/12 09:27
Bromide	< 1	mg/l			WG612172	09/14/12 21:43
Chloride	< 1	mg/l			WG612172	09/14/12 21:43
Fluoride	< .1	mg/l			WG612172	09/14/12 21:43
Sulfate	< 5	mg/l			WG612172	09/14/12 21:43
1,2,4-Trichlorobenzene	< .01	mg/l			WG612335	09/16/12 12:43
2,4,6-Trichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dimethylphenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2,6-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2-Chloronaphthalene	< .001	mg/l			WG612335	09/16/12 12:43
2-Chlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
3,3-Dichlorobenzidine	< .01	mg/l			WG612335	09/16/12 12:43
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Bromophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Chloro-3-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Chlorophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
Acenaphthene	< .001	mg/l			WG612335	09/16/12 12:43
Acenaphthylene	< .001	mg/l			WG612335	09/16/12 12:43
Anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzidine	< .01	mg/l			WG612335	09/16/12 12:43
Benzo(a)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(a)pyrene	< .001	mg/l			WG612335	09/16/12 12:43

\* Performance of this Analyte is outside of established criteria.

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





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Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(b)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(g,h,i)perylene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(k)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzylbutyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethoxy)methane	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Chrysene	< .001	mg/l			WG612335	09/16/12 12:43
Di-n-butyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Di-n-octyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dibenz(a,h)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Diethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dimethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Fluorene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachloro-1,3-butadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachlorobenzene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachlorocyclopentadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachloroethane	< .01	mg/l			WG612335	09/16/12 12:43
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG612335	09/16/12 12:43
Isophorone	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodi-n-propylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodimethylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodiphenylamine	< .01	mg/l			WG612335	09/16/12 12:43
Naphthalene	< .001	mg/l			WG612335	09/16/12 12:43
Nitrobenzene	< .01	mg/l			WG612335	09/16/12 12:43
Pentachlorophenol	< .001	mg/l			WG612335	09/16/12 12:43
Phenanthrene	< .001	mg/l			WG612335	09/16/12 12:43
Phenol	< .01	mg/l			WG612335	09/16/12 12:43
Pyrene	< .001	mg/l			WG612335	09/16/12 12:43
2,4,6-Tribromophenol		% Rec.	54.44	16-147	WG612335	09/16/12 12:43
2-Fluorobiphenyl		% Rec.	66.96	29-127	WG612335	09/16/12 12:43
2-Fluorophenol		% Rec.	36.74	10-75	WG612335	09/16/12 12:43
Nitrobenzene-d5		% Rec.	61.08	17-119	WG612335	09/16/12 12:43
Phenol-d5		% Rec.	30.33	10-63	WG612335	09/16/12 12:43
p-Terphenyl-d14		% Rec.	78.70	40-174	WG612335	09/16/12 12:43
Specific Conductance	4.71	umhos/cm			WG612653	09/16/12 09:29
Antimony,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Arsenic,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Molybdenum,Dissolved	< .002	mg/l			WG612880	09/17/12 03:28
Selenium,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Mercury,Dissolved	< .0002	mg/l			WG612402	09/17/12 11:46
TPH (GC/FID) High Fraction	< .1	ppm			WG612215	09/14/12 19:14
o-Terphenyl		% Rec.	100.4	50-150	WG612215	09/14/12 19:14
Dissolved Solids	< 10	mg/l			WG612486	09/18/12 10:34
Barium,Dissolved	< .005	mg/l			WG612985	09/18/12 00:11

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Calcium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Chromium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Copper,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Iron,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Magnesium,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Manganese,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Nickel,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Potassium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Silicon,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Sodium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Strontium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Vanadium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Zinc,Dissolved	< .03	mg/l			WG612985	09/18/12 00:11
Lithium,Dissolved	< .015	mg/l			WG613202	09/19/12 08:29

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury	mg/l	0	0		0	20	L594224-01	WG611975
Alkalinity	mg/l	300.	290.		2.39	20	L594221-01	WG612248
Alkalinity	mg/l	0	0		0	20	L594275-03	WG612248
TOC (Total Organic Carbon)	mg/l	2300	2300		1.76	20	L593857-03	WG612253
TOC (Total Organic Carbon)	mg/l	32.0	32.0		0.156	20	L594524-07	WG612253
pH	su	7.50	7.50		0.267	1	L594224-01	WG612480
pH	su	7.90	7.90		0.253	1	L594643-02	WG612480
Chloride	mg/l	10.0	11.0		4.65	20	L594275-04	WG612172
Sulfate	mg/l	8.10	8.10		0	20	L594275-04	WG612172
Sulfate	mg/l	35.0	35.0		0.286	20	L594374-10	WG612172
Specific Conductance	umhos/cm	910.	910.		0.439	20	L594221-01	WG612653
Specific Conductance	umhos/cm	410.	410.		0.489	20	L595027-02	WG612653
Antimony,Dissolved	mg/l	0	0		0	20	L594224-01	WG612880
Arsenic,Dissolved	mg/l	0.00140	0.00150		4.08	20	L594224-01	WG612880
Molybdenum,Dissolved	mg/l	0.00370	0.00370		1.08*	0	L594224-01	WG612880
Selenium,Dissolved	mg/l	0.00800	0.00720		10.3	20	L594224-01	WG612880
Mercury,Dissolved	mg/l	0	0		0	20	L594224-01	WG612402
Dissolved Solids	mg/l	2600	2550		0.0392	5	L594224-01	WG612486
Barium,Dissolved	mg/l	0.0640	0.0630		1.26	20	L594520-01	WG612985
Boron,Dissolved	mg/l	0.460	0.448		2.64*	0	L594520-01	WG612985

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	120.	120.	1.65	20	L594520-01	WG612985
Chromium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Copper,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Iron,Dissolved	mg/l	4.00	3.89	2.79	20	L594520-01	WG612985
Magnesium,Dissolved	mg/l	50.0	48.0	3.08	20	L594520-01	WG612985
Manganese,Dissolved	mg/l	0.410	0.401	2.46	20	L594520-01	WG612985
Nickel,Dissolved	mg/l	0	0.00390	NA	20	L594520-01	WG612985
Potassium,Dissolved	mg/l	8.30	8.30	0.481	20	L594520-01	WG612985
Silicon,Dissolved	mg/l	13.0	12.7	3.10*	0	L594520-01	WG612985
Sodium,Dissolved	mg/l	50.0	49.8	0.201	20	L594520-01	WG612985
Strontium,Dissolved	mg/l	0.190	0.188	0.533	20	L594520-01	WG612985
Vanadium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Zinc,Dissolved	mg/l	0.0370	0.0373	1.62	20	L594520-01	WG612985
Lithium,Dissolved	mg/l	0.0470	0.0449	4.14	20	L595020-01	WG613202

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	5.77	105.	70-124	WG611964
a,a,a-Trifluorotoluene(FID)				107.7	62-128	WG611964
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0263	105.	77-128	WG611956
1,1,1-Trichloroethane	mg/l	.025	0.0254	102.	71-126	WG611956
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.2	78-130	WG611956
1,1,2-Trichloroethane	mg/l	.025	0.0248	99.3	81-121	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0257	103.	53-143	WG611956
1,1-Dichloroethane	mg/l	.025	0.0242	96.9	73-123	WG611956
1,1-Dichloroethene	mg/l	.025	0.0248	99.1	54-134	WG611956
1,1-Dichloropropene	mg/l	.025	0.0247	98.9	67-127	WG611956
1,2,3-Trichlorobenzene	mg/l	.025	0.0266	106.	77-130	WG611956
1,2,3-Trichloropropane	mg/l	.025	0.0265	106.	68-130	WG611956
1,2,3-Trimethylbenzene	mg/l	.025	0.0234	93.6	77-126	WG611956
1,2,4-Trichlorobenzene	mg/l	.025	0.0271	108.	76-127	WG611956
1,2,4-Trimethylbenzene	mg/l	.025	0.0253	101.	77-129	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0270	108.	55-142	WG611956
1,2-Dibromoethane	mg/l	.025	0.0260	104.	78-124	WG611956
1,2-Dichlorobenzene	mg/l	.025	0.0245	98.2	82-121	WG611956
1,2-Dichloroethane	mg/l	.025	0.0252	101.	69-128	WG611956
1,2-Dichloropropane	mg/l	.025	0.0247	98.6	77-121	WG611956
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG611956
1,3-Dichlorobenzene	mg/l	.025	0.0251	100.	77-127	WG611956
1,3-Dichloropropane	mg/l	.025	0.0247	98.7	78-117	WG611956
1,4-Dichlorobenzene	mg/l	.025	0.0245	97.9	79-117	WG611956
2,2-Dichloropropane	mg/l	.025	0.0259	104.	63-130	WG611956
2-Butanone (MEK)	mg/l	.125	0.171	137.	58-144	WG611956
2-Chloroethyl vinyl ether	mg/l	.125	0.146	117.	26-172	WG611956
2-Chlorotoluene	mg/l	.025	0.0250	99.8	78-123	WG611956
4-Chlorotoluene	mg/l	.025	0.0248	99.1	78-122	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.146	117.	58-147	WG611956
Acetone	mg/l	.125	0.200	160.*	49-153	WG611956
Acrolein	mg/l	.125	0.0700	56.0	10-181	WG611956
Acrylonitrile	mg/l	.125	0.140	112.	53-153	WG611956
Benzene	mg/l	.025	0.0238	95.3	72-119	WG611956
Bromobenzene	mg/l	.025	0.0244	97.6	76-121	WG611956
Bromodichloromethane	mg/l	.025	0.0245	98.0	75-127	WG611956
Bromoform	mg/l	.025	0.0261	105.	61-136	WG611956

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromomethane	mg/l	.025	0.0257	103.	42-172	WG611956
Carbon tetrachloride	mg/l	.025	0.0245	98.2	63-129	WG611956
Chlorobenzene	mg/l	.025	0.0242	96.9	78-123	WG611956
Chlorodibromomethane	mg/l	.025	0.0252	101.	73-128	WG611956
Chloroethane	mg/l	.025	0.0260	104.	52-164	WG611956
Chloroform	mg/l	.025	0.0250	100.	76-122	WG611956
Chloromethane	mg/l	.025	0.0243	97.1	50-141	WG611956
cis-1,2-Dichloroethene	mg/l	.025	0.0242	96.7	75-121	WG611956
cis-1,3-Dichloropropene	mg/l	.025	0.0247	98.8	74-124	WG611956
Di-isopropyl ether	mg/l	.025	0.0256	102.	66-129	WG611956
Dibromomethane	mg/l	.025	0.0257	103.	77-124	WG611956
Dichlorodifluoromethane	mg/l	.025	0.0243	97.3	33-173	WG611956
Ethylbenzene	mg/l	.025	0.0248	99.3	77-124	WG611956
Hexachloro-1,3-butadiene	mg/l	.025	0.0248	99.2	71-134	WG611956
Isopropylbenzene	mg/l	.025	0.0276	110.	74-126	WG611956
Methyl tert-butyl ether	mg/l	.025	0.0271	108.	67-127	WG611956
Methylene Chloride	mg/l	.025	0.0238	95.4	67-122	WG611956
n-Butylbenzene	mg/l	.025	0.0250	99.9	74-130	WG611956
n-Propylbenzene	mg/l	.025	0.0248	99.1	77-125	WG611956
Naphthalene	mg/l	.025	0.0267	107.	70-134	WG611956
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG611956
sec-Butylbenzene	mg/l	.025	0.0256	102.	77-130	WG611956
Styrene	mg/l	.025	0.0256	102.	69-145	WG611956
tert-Butylbenzene	mg/l	.025	0.0257	103.	76-131	WG611956
Tetrachloroethene	mg/l	.025	0.0243	97.2	69-131	WG611956
Toluene	mg/l	.025	0.0242	96.7	75-114	WG611956
trans-1,2-Dichloroethene	mg/l	.025	0.0240	96.1	63-127	WG611956
trans-1,3-Dichloropropene	mg/l	.025	0.0243	97.4	69-124	WG611956
Trichloroethene	mg/l	.025	0.0235	94.0	69-131	WG611956
Trichlorofluoromethane	mg/l	.025	0.0254	102.	53-161	WG611956
Vinyl chloride	mg/l	.025	0.0255	102.	55-142	WG611956
Xylenes, Total	mg/l	.075	0.0748	99.7	77-123	WG611956
4-Bromofluorobenzene				101.6	82-120	WG611956
Dibromofluoromethane				102.3	82-126	WG611956
Toluene-d8				103.1	92-112	WG611956
Mercury	mg/l	.003	0.00290	96.7	85-115	WG611975
Ethane	mg/l	.645	0.737	114.	70-130	WG612418
Ethene	mg/l	.635	0.706	111.	70-130	WG612418
Methane	mg/l	.339	0.373	110.	70-130	WG612418
Alkalinity	mg/l	100	94.0	94.0	85-115	WG612248
TOC (Total Organic Carbon)	mg/l	75	74.1	98.8	85-115	WG612253
pH	su	6.03	6.03	100.	98-101	WG612480
Bromide	mg/l	40	39.8	99.5	90-110	WG612172
Chloride	mg/l	40	39.7	99.3	90-110	WG612172
Fluoride	mg/l	8	7.92	99.0	90-110	WG612172
Sulfate	mg/l	40	38.6	96.5	90-110	WG612172

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00694	69.4	18-130	WG612335
2,4,6-Trichlorophenol	mg/l	.01	0.00702	70.2	12-147	WG612335
2,4-Dichlorophenol	mg/l	.01	0.00764	76.4	10-157	WG612335
2,4-Dimethylphenol	mg/l	.01	0.00819	81.9	19-160	WG612335
2,4-Dinitrophenol	mg/l	.01	0.00492	49.2	10-135	WG612335
2,4-Dinitrotoluene	mg/l	.01	0.00821	82.1	30-168	WG612335
2,6-Dinitrotoluene	mg/l	.01	0.00854	85.4	32-163	WG612335
2-Chloronaphthalene	mg/l	.01	0.00761	76.1	29-149	WG612335
2-Chlorophenol	mg/l	.01	0.00654	65.4	16-129	WG612335
2-Nitrophenol	mg/l	.01	0.00815	81.5	14-158	WG612335
3,3-Dichlorobenzidine	mg/l	.01	0.00909	90.9	42-150	WG612335
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00606	60.6	10-164	WG612335
4-Bromophenyl-phenylether	mg/l	.01	0.00778	77.8	40-166	WG612335
4-Chloro-3-methylphenol	mg/l	.01	0.00719	71.9	14-158	WG612335
4-Chlorophenyl-phenylether	mg/l	.01	0.00844	84.4	39-155	WG612335
4-Nitrophenol	mg/l	.01	0.00184	18.4	10-61	WG612335
Acenaphthene	mg/l	.01	0.00796	79.6	37-159	WG612335
Acenaphthylene	mg/l	.01	0.00754	75.4	34-162	WG612335
Anthracene	mg/l	.01	0.00817	81.7	48-167	WG612335
Benzidine	mg/l	.01	0.00207	20.7	10-86	WG612335
Benzo(a)anthracene	mg/l	.01	0.00834	83.4	46-167	WG612335
Benzo(a)pyrene	mg/l	.01	0.00864	86.4	39-167	WG612335
Benzo(b)fluoranthene	mg/l	.01	0.00840	84.0	39-173	WG612335
Benzo(g,h,i)perylene	mg/l	.01	0.00901	90.1	42-181	WG612335
Benzo(k)fluoranthene	mg/l	.01	0.00875	87.5	42-178	WG612335
Benzylbutyl phthalate	mg/l	.01	0.00862	86.2	10-178	WG612335
Bis(2-chlorethoxy)methane	mg/l	.01	0.00854	85.4	34-155	WG612335
Bis(2-chloroethyl)ether	mg/l	.01	0.00857	85.7	22-149	WG612335
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00797	79.7	26-149	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00900	90.0	42-191	WG612335
Chrysene	mg/l	.01	0.00892	89.2	46-170	WG612335
Di-n-butyl phthalate	mg/l	.01	0.00816	81.6	33-175	WG612335
Di-n-octyl phthalate	mg/l	.01	0.00809	80.9	40-170	WG612335
Dibenz(a,h)anthracene	mg/l	.01	0.00872	87.2	43-187	WG612335
Diethyl phthalate	mg/l	.01	0.00826	82.6	10-182	WG612335
Dimethyl phthalate	mg/l	.01	0.00852	85.2	10-165	WG612335
Fluoranthene	mg/l	.01	0.00838	83.8	46-171	WG612335
Fluorene	mg/l	.01	0.00805	80.5	39-163	WG612335
Hexachloro-1,3-butadiene	mg/l	.01	0.00662	66.2	18-136	WG612335
Hexachlorobenzene	mg/l	.01	0.00701	70.1	38-163	WG612335
Hexachlorocyclopentadiene	mg/l	.01	0.00303	30.3	10-142	WG612335
Hexachloroethane	mg/l	.01	0.00651	65.1	10-130	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00869	86.9	42-184	WG612335
Isophorone	mg/l	.01	0.00847	84.7	36-166	WG612335
n-Nitrosodi-n-propylamine	mg/l	.01	0.00865	86.5	27-157	WG612335
n-Nitrosodimethylamine	mg/l	.01	0.00457	45.7	10-96	WG612335
n-Nitrosodiphenylamine	mg/l	.01	0.00807	80.7	41-168	WG612335
Naphthalene	mg/l	.01	0.00741	74.1	26-147	WG612335
Nitrobenzene	mg/l	.01	0.00819	81.9	22-154	WG612335
Pentachlorophenol	mg/l	.01	0.00351	35.1	10-128	WG612335
Phenanthrene	mg/l	.01	0.00799	79.9	46-163	WG612335
Phenol	mg/l	.01	0.00268	26.8	10-69	WG612335
Pyrene	mg/l	.01	0.00860	86.0	45-176	WG612335
2,4,6-Tribromophenol				60.98	16-147	WG612335
2-Fluorobiphenyl				74.83	29-127	WG612335
2-Fluorophenol				33.71	10-75	WG612335
Nitrobenzene-d5				78.22	17-119	WG612335
Phenol-d5				25.50	10-63	WG612335

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
p-Terphenyl-d14				84.42	40-174	
Specific Conductance	umhos/cm	1050	1080	103.	85-115	WG612653
Antimony,Dissolved	mg/l	.05	0.0488	97.6	85-115	WG612880
Arsenic,Dissolved	mg/l	.05	0.0460	92.0	85-115	WG612880
Molybdenum,Dissolved	mg/l	.05	0.0489	97.8	85-115	WG612880
Selenium,Dissolved	mg/l	.05	0.0448	89.6	85-115	WG612880
Mercury,Dissolved	mg/l	.003	0.00284	94.7	85-115	WG612402
TPH (GC/FID) High Fraction	ppm	1.5	2.20	147.	50-150	WG612215
o-Terphenyl				137.0	50-150	WG612215
Dissolved Solids	mg/l	8800	8640	98.2	85-115	WG612486
Barium,Dissolved	mg/l	1	1.04	104.	85-115	WG612985
Boron,Dissolved	mg/l	1	0.950	95.0	85-115	WG612985
Calcium,Dissolved	mg/l	10	10.4	104.	85-115	WG612985
Chromium,Dissolved	mg/l	1	1.02	102.	85-115	WG612985
Copper,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Iron,Dissolved	mg/l	1	0.989	98.9	85-115	WG612985
Magnesium,Dissolved	mg/l	10	10.8	108.	85-115	WG612985
Manganese,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Nickel,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Potassium,Dissolved	mg/l	10	10.2	102.	85-115	WG612985
Silicon,Dissolved	mg/l	1	0.902	90.2	85-115	WG612985
Sodium,Dissolved	mg/l	10	10.5	105.	85-115	WG612985
Strontium,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Vanadium,Dissolved	mg/l	1	0.996	99.6	85-115	WG612985
Zinc,Dissolved	mg/l	1	1.06	106.	85-115	WG612985
Lithium,Dissolved	mg/l	.5	0.525	105.	85-115	WG613202

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	5.39	5.77	98.0	70-124	6.89	20	WG611964
a,a,a-Trifluorotoluene(FID)				107.1	62-128			WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0255	0.0263	102.	77-128	2.88	20	WG611956
1,1,1-Trichloroethane	mg/l	0.0247	0.0254	99.0	71-126	2.77	20	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0240	0.0246	96.0	78-130	2.36	20	WG611956
1,1,2-Trichloroethane	mg/l	0.0247	0.0248	99.0	81-121	0.660	20	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0250	0.0257	100.	53-143	2.83	20	WG611956
1,1-Dichloroethane	mg/l	0.0244	0.0242	98.0	73-123	0.690	20	WG611956
1,1-Dichloroethene	mg/l	0.0248	0.0248	99.0	54-134	0.310	20	WG611956
1,1-Dichloropropene	mg/l	0.0252	0.0247	101.	67-127	1.87	20	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0269	0.0266	108.	77-130	1.13	20	WG611956
1,2,3-Trichloropropane	mg/l	0.0245	0.0265	98.0	68-130	7.68	20	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0238	0.0234	95.0	77-126	1.55	20	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0274	0.0271	109.	76-127	0.980	20	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0254	0.0253	102.	77-129	0.500	20	WG611956

\* 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

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
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Quality Assurance Report  
Level II

L594224

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0261	0.0270	104.	55-142	3.49	20	WG611956
1,2-Dibromoethane	mg/l	0.0254	0.0260	102.	78-124	2.42	20	WG611956
1,2-Dichlorobenzene	mg/l	0.0253	0.0245	101.	82-121	3.07	20	WG611956
1,2-Dichloroethane	mg/l	0.0250	0.0252	100.	69-128	0.740	20	WG611956
1,2-Dichloropropane	mg/l	0.0245	0.0247	98.0	77-121	0.810	20	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0256	0.0256	102.	78-127	0.0400	20	WG611956
1,3-Dichlorobenzene	mg/l	0.0254	0.0251	102.	77-127	1.21	20	WG611956
1,3-Dichloropropane	mg/l	0.0245	0.0247	98.0	78-117	0.730	20	WG611956
1,4-Dichlorobenzene	mg/l	0.0252	0.0245	101.	79-117	3.02	20	WG611956
2,2-Dichloropropane	mg/l	0.0246	0.0259	98.0	63-130	5.34	20	WG611956
2-Butanone (MEK)	mg/l	0.158	0.171	126.	58-144	7.91	20	WG611956
2-Chloroethyl vinyl ether	mg/l	0.141	0.146	113.	26-172	3.43	22	WG611956
2-Chlorotoluene	mg/l	0.0253	0.0250	101.	78-123	1.18	20	WG611956
4-Chlorotoluene	mg/l	0.0251	0.0248	100.	78-122	1.35	20	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.137	0.146	109.	58-147	6.53	20	WG611956
Acetone	mg/l	0.184	0.200	147.	49-153	8.21	21	WG611956
Acrolein	mg/l	0.0680	0.0700	54.0	10-181	2.92	30	WG611956
Acrylonitrile	mg/l	0.132	0.140	106.	53-153	5.74	20	WG611956
Benzene	mg/l	0.0242	0.0238	97.0	72-119	1.77	20	WG611956
Bromobenzene	mg/l	0.0246	0.0244	98.0	76-121	0.960	20	WG611956
Bromodichloromethane	mg/l	0.0245	0.0245	98.0	75-127	0.140	20	WG611956
Bromoform	mg/l	0.0260	0.0261	104.	61-136	0.610	20	WG611956
Bromomethane	mg/l	0.0253	0.0257	101.	42-172	1.67	20	WG611956
Carbon tetrachloride	mg/l	0.0243	0.0245	97.0	63-129	0.850	20	WG611956
Chlorobenzene	mg/l	0.0249	0.0242	99.0	78-123	2.59	20	WG611956
Chlorodibromomethane	mg/l	0.0250	0.0252	100.	73-128	0.660	20	WG611956
Chloroethane	mg/l	0.0266	0.0260	106.	52-164	2.16	20	WG611956
Chloroform	mg/l	0.0249	0.0250	99.0	76-122	0.710	20	WG611956
Chloromethane	mg/l	0.0236	0.0243	94.0	50-141	2.69	20	WG611956
cis-1,2-Dichloroethene	mg/l	0.0239	0.0242	96.0	75-121	1.04	20	WG611956
cis-1,3-Dichloropropene	mg/l	0.0252	0.0247	101.	74-124	1.92	20	WG611956
Di-isopropyl ether	mg/l	0.0253	0.0256	101.	66-129	1.00	20	WG611956
Dibromomethane	mg/l	0.0256	0.0257	102.	77-124	0.550	20	WG611956
Dichlorodifluoromethane	mg/l	0.0247	0.0243	99.0	33-173	1.63	20	WG611956
Ethylbenzene	mg/l	0.0256	0.0248	102.	77-124	3.17	20	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0249	0.0248	99.0	71-134	0.330	20	WG611956
Isopropylbenzene	mg/l	0.0275	0.0276	110.	74-126	0.340	20	WG611956
Methyl tert-butyl ether	mg/l	0.0256	0.0271	102.	67-127	5.72	20	WG611956
Methylene Chloride	mg/l	0.0237	0.0238	95.0	67-122	0.430	20	WG611956
n-Butylbenzene	mg/l	0.0259	0.0250	104.	74-130	3.58	20	WG611956
n-Propylbenzene	mg/l	0.0251	0.0248	100.	77-125	1.14	20	WG611956
Naphthalene	mg/l	0.0260	0.0267	104.	70-134	2.36	20	WG611956
p-Isopropyltoluene	mg/l	0.0262	0.0263	105.	77-132	0.600	20	WG611956
sec-Butylbenzene	mg/l	0.0253	0.0256	101.	77-130	1.37	20	WG611956
Styrene	mg/l	0.0259	0.0256	104.	69-145	1.47	20	WG611956
tert-Butylbenzene	mg/l	0.0254	0.0257	102.	76-131	1.04	20	WG611956
Tetrachloroethene	mg/l	0.0249	0.0243	100.	69-131	2.44	20	WG611956
Toluene	mg/l	0.0247	0.0242	99.0	75-114	1.99	20	WG611956
trans-1,2-Dichloroethene	mg/l	0.0241	0.0240	96.0	63-127	0.360	20	WG611956
trans-1,3-Dichloropropene	mg/l	0.0245	0.0243	98.0	69-124	0.460	20	WG611956
Trichloroethene	mg/l	0.0235	0.0235	94.0	69-131	0.170	20	WG611956
Trichlorofluoromethane	mg/l	0.0256	0.0254	102.	53-161	0.530	20	WG611956
Vinyl chloride	mg/l	0.0250	0.0255	100.	55-142	1.78	20	WG611956
Xylenes, Total	mg/l	0.0759	0.0748	101.	77-123	1.50	20	WG611956
4-Bromofluorobenzene				100.3	82-120			WG611956
Dibromofluoromethane				100.8	82-126			WG611956
Toluene-d8				103.4	92-112			WG611956

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September 19, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.693	0.737	108.	70-130	6.07	25	WG612418
Ethene	mg/l	0.666	0.706	105.	70-130	5.89	25	WG612418
Methane	mg/l	0.349	0.373	103.	70-130	6.50	25	WG612418
Alkalinity	mg/l	99.0	94.0	99.0	85-115	5.18	20	WG612248
TOC (Total Organic Carbon)	mg/l	72.5	74.1	97.0	85-115	2.10	20	WG612253
pH	su	6.04	6.03	100.	98-101	0.166	20	WG612480
Bromide	mg/l	39.8	39.8	100.	90-110	0	20	WG612172
Chloride	mg/l	39.7	39.7	99.0	90-110	0	20	WG612172
Fluoride	mg/l	7.92	7.92	99.0	90-110	0	20	WG612172
Sulfate	mg/l	38.7	38.6	97.0	90-110	0.259	20	WG612172
1,2,4-Trichlorobenzene	mg/l	0.00642	0.00694	64.0	18-130	7.85	32	WG612335
2,4,6-Trichlorophenol	mg/l	0.00620	0.00702	62.0	12-147	12.4	40	WG612335
2,4-Dichlorophenol	mg/l	0.00684	0.00764	68.0	10-157	11.1	40	WG612335
2,4-Dimethylphenol	mg/l	0.00700	0.00819	70.0	19-160	15.6	40	WG612335
2,4-Dinitrophenol	mg/l	0.00471	0.00492	47.0	10-135	4.43	40	WG612335
2,4-Dinitrotoluene	mg/l	0.00723	0.00821	72.0	30-168	12.7	32	WG612335
2,6-Dinitrotoluene	mg/l	0.00743	0.00854	74.0	32-163	13.9	30	WG612335
2-Chloronaphthalene	mg/l	0.00645	0.00761	64.0	29-149	16.5	34	WG612335
2-Chlorophenol	mg/l	0.00582	0.00654	58.0	16-129	11.7	40	WG612335
2-Nitrophenol	mg/l	0.00704	0.00815	70.0	14-158	14.6	40	WG612335
3,3-Dichlorobenzidine	mg/l	0.00804	0.00909	80.0	42-150	12.3	29	WG612335
4,6-Dinitro-2-methylphenol	mg/l	0.00505	0.00606	50.0	10-164	18.1	40	WG612335
4-Bromophenyl-phenylether	mg/l	0.00751	0.00778	75.0	40-166	3.57	36	WG612335
4-Chloro-3-methylphenol	mg/l	0.00645	0.00719	64.0	14-158	10.8	40	WG612335
4-Chlorophenyl-phenylether	mg/l	0.00812	0.00844	81.0	39-155	3.85	33	WG612335
4-Nitrophenol	mg/l	0.00200	0.00184	20.0	10-61	8.46	40	WG612335
Acenaphthene	mg/l	0.00707	0.00796	71.0	37-159	11.9	30	WG612335
Acenaphthylene	mg/l	0.00710	0.00754	71.0	34-162	6.01	31	WG612335
Anthracene	mg/l	0.00752	0.00817	75.0	48-167	8.28	26	WG612335
Benzidine	mg/l	0.00262	0.00207	26.0	10-86	23.5	40	WG612335
Benzo(a)anthracene	mg/l	0.00725	0.00834	72.0	46-167	13.9	29	WG612335
Benzo(a)pyrene	mg/l	0.00719	0.00864	72.0	39-167	18.4	29	WG612335
Benzo(b)fluoranthene	mg/l	0.00772	0.00840	77.0	39-173	8.42	32	WG612335
Benzo(g,h,i)perylene	mg/l	0.00765	0.00901	76.0	42-181	16.3	30	WG612335
Benzo(k)fluoranthene	mg/l	0.00739	0.00875	74.0	42-178	16.9	33	WG612335
Benzylbutyl phthalate	mg/l	0.00762	0.00862	76.0	10-178	12.2	40	WG612335
Bis(2-chlorethoxy)methane	mg/l	0.00751	0.00854	75.0	34-155	12.9	31	WG612335
Bis(2-chloroethyl)ether	mg/l	0.00759	0.00857	76.0	22-149	12.1	38	WG612335
Bis(2-chloroisopropyl)ether	mg/l	0.00688	0.00797	69.0	26-149	14.8	34	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	0.00814	0.00900	81.0	42-191	9.99	33	WG612335
Chrysene	mg/l	0.00798	0.00892	80.0	46-170	11.1	30	WG612335
Di-n-butyl phthalate	mg/l	0.00790	0.00816	79.0	33-175	3.19	39	WG612335
Di-n-octyl phthalate	mg/l	0.00744	0.00809	74.0	40-170	8.44	28	WG612335
Dibenz(a,h)anthracene	mg/l	0.00778	0.00872	78.0	43-187	11.3	31	WG612335
Diethyl phthalate	mg/l	0.00767	0.00826	77.0	10-182	7.33	35	WG612335
Dimethyl phthalate	mg/l	0.00800	0.00852	80.0	10-165	6.37	37	WG612335
Fluoranthene	mg/l	0.00763	0.00838	76.0	46-171	9.32	37	WG612335
Fluorene	mg/l	0.00736	0.00805	74.0	39-163	9.02	36	WG612335
Hexachloro-1,3-butadiene	mg/l	0.00606	0.00662	60.0	18-136	8.84	30	WG612335

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hexachlorobenzene	mg/l	0.00702	0.00701	70.0	38-163	0.0901	35	WG612335
Hexachlorocyclopentadiene	mg/l	0.00248	0.00303	25.0	10-142	20.1	40	WG612335
Hexachloroethane	mg/l	0.00554	0.00651	55.0	10-130	16.2	39	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	0.00774	0.00869	77.0	42-184	11.6	32	WG612335
Isophorone	mg/l	0.00795	0.00847	80.0	36-166	6.30	35	WG612335
n-Nitrosodi-n-propylamine	mg/l	0.00758	0.00865	76.0	27-157	13.3	31	WG612335
n-Nitrosodimethylamine	mg/l	0.00428	0.00457	43.0	10-96	6.51	36	WG612335
n-Nitrosodiphenylamine	mg/l	0.00712	0.00807	71.0	41-168	12.6	37	WG612335
Naphthalene	mg/l	0.00652	0.00741	65.0	26-147	12.9	31	WG612335
Nitrobenzene	mg/l	0.00734	0.00819	73.0	22-154	11.0	37	WG612335
Pentachlorophenol	mg/l	0.00350	0.00351	35.0	10-128	0.270	40	WG612335
Phenanthrene	mg/l	0.00737	0.00799	74.0	46-163	8.00	29	WG612335
Phenol	mg/l	0.00283	0.00268	28.0	10-69	5.60	40	WG612335
Pyrene	mg/l	0.00768	0.00860	77.0	45-176	11.3	28	WG612335
2,4,6-Tribromophenol				59.03	16-147			WG612335
2-Fluorobiphenyl				68.14	29-127			WG612335
2-Fluorophenol				32.43	10-75			WG612335
Nitrobenzene-d5				73.11	17-119			WG612335
Phenol-d5				25.85	10-63			WG612335
p-Terphenyl-d14				72.88	40-174			WG612335
Specific Conductance	umhos/	1080	1080	103.	85-115	0	20	WG612653
TPH (GC/FID) High Fraction	ppm	2.10	2.20	140.	50-150	4.65	20	WG612215
o-Terphenyl				119.9	50-150			WG612215
Dissolved Solids	mg/l	8690	8640	99.0	85-115	0.554	5	WG612486

Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref Res						
TPH (GC/FID) Low Fraction	mg/l	5.38	0		5.5	97.7	55-109	L594224-01	WG611964
a,a,a-Trifluorotoluene(FID)						105.1	62-128		WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0257	0	.025	103.		71-130	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0251	0	.025	100.		58-137	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0235	0	.025	94.0		64-149	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0245	0	.025	98.2		73-128	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0244	0	.025	97.5		36-159	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0241	0	.025	96.4		58-133	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0246	0	.025	98.3		32-152	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0237	0	.025	94.6		50-140	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0255	0	.025	102.		68-135	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0250	0	.025	99.9		74-137	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0237	0	.025	95.0		67-133	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0250	0	.025	99.8		67-133	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0242	0	.025	96.7		62-141	L594224-01	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	0.0255	0	.025	102.		55-148	L594224-01	WG611956
1,2-Dibromoethane	mg/l	0.0255	0	.025	102.		71-129	L594224-01	WG611956
1,2-Dichlorobenzene	mg/l	0.0242	0	.025	96.7		75-125	L594224-01	WG611956
1,2-Dichloroethane	mg/l	0.0247	0	.025	98.9		59-135	L594224-01	WG611956
1,2-Dichloropropane	mg/l	0.0244	0	.025	97.7		68-126	L594224-01	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0249	0	.025	99.5		67-136	L594224-01	WG611956
1,3-Dichlorobenzene	mg/l	0.0239	0	.025	95.5		69-131	L594224-01	WG611956
1,3-Dichloropropane	mg/l	0.0242	0	.025	96.7		70-122	L594224-01	WG611956

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,4-Dichlorobenzene	mg/l	0.0237	0	.025	94.8	70-123	L594224-01	WG611956
2,2-Dichloropropane	mg/l	0.0251	0	.025	100.	51-141	L594224-01	WG611956
2-Butanone (MEK)	mg/l	0.132	0	.125	106.	51-149	L594224-01	WG611956
2-Chloroethyl vinyl ether	mg/l	0.000324	0	.125	0.259*	10-161	L594224-01	WG611956
2-Chlorotoluene	mg/l	0.0243	0	.025	97.1	65-133	L594224-01	WG611956
4-Chlorotoluene	mg/l	0.0238	0	.025	95.2	67-129	L594224-01	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.135	0	.125	108.	53-154	L594224-01	WG611956
Acetone	mg/l	0.116	0	.125	92.8	34-146	L594224-01	WG611956
Acrolein	mg/l	0.132	0	.125	105.	10-189	L594224-01	WG611956
Acrylonitrile	mg/l	0.135	0	.125	108.	49-162	L594224-01	WG611956
Benzene	mg/l	0.0240	0	.025	95.9	51-134	L594224-01	WG611956
Bromobenzene	mg/l	0.0240	0	.025	96.1	64-130	L594224-01	WG611956
Bromodichloromethane	mg/l	0.0246	0	.025	98.4	67-132	L594224-01	WG611956
Bromoform	mg/l	0.0254	0	.025	102.	59-137	L594224-01	WG611956
Bromomethane	mg/l	0.0260	0	.025	104.	23-177	L594224-01	WG611956
Carbon tetrachloride	mg/l	0.0243	0	.025	97.2	49-140	L594224-01	WG611956
Chlorobenzene	mg/l	0.0241	0	.025	96.5	69-126	L594224-01	WG611956
Chlorodibromomethane	mg/l	0.0248	0	.025	99.0	68-130	L594224-01	WG611956
Chloroethane	mg/l	0.0261	0	.025	104.	32-177	L594224-01	WG611956
Chloroform	mg/l	0.0249	0	.025	99.5	64-130	L594224-01	WG611956
Chloromethane	mg/l	0.0240	0	.025	95.9	27-155	L594224-01	WG611956
cis-1,2-Dichloroethene	mg/l	0.0240	0	.025	96.0	54-137	L594224-01	WG611956
cis-1,3-Dichloropropene	mg/l	0.0238	0	.025	95.4	63-127	L594224-01	WG611956
Di-isopropyl ether	mg/l	0.0262	0	.025	105.	58-133	L594224-01	WG611956
Dibromomethane	mg/l	0.0254	0	.025	102.	68-131	L594224-01	WG611956
Dichlorodifluoromethane	mg/l	0.0245	0	.025	98.2	16-188	L594224-01	WG611956
Ethylbenzene	mg/l	0.0246	0	.025	98.4	64-135	L594224-01	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0236	0	.025	94.2	64-140	L594224-01	WG611956
Isopropylbenzene	mg/l	0.0272	0	.025	109.	62-134	L594224-01	WG611956
Methyl tert-butyl ether	mg/l	0.0270	0	.025	108.	55-136	L594224-01	WG611956
Methylene Chloride	mg/l	0.0233	0	.025	93.3	52-130	L594224-01	WG611956
n-Butylbenzene	mg/l	0.0233	0	.025	93.0	62-142	L594224-01	WG611956
n-Propylbenzene	mg/l	0.0237	0	.025	94.8	62-137	L594224-01	WG611956
Naphthalene	mg/l	0.0250	0	.025	99.9	65-140	L594224-01	WG611956
p-Isopropyltoluene	mg/l	0.0252	0	.025	101.	64-142	L594224-01	WG611956
sec-Butylbenzene	mg/l	0.0249	0	.025	99.7	67-139	L594224-01	WG611956
Styrene	mg/l	0.0238	0	.025	95.1	58-152	L594224-01	WG611956
tert-Butylbenzene	mg/l	0.0254	0	.025	102.	66-139	L594224-01	WG611956
Tetrachloroethene	mg/l	0.0229	0	.025	91.6	56-139	L594224-01	WG611956
Toluene	mg/l	0.0243	0	.025	97.4	61-126	L594224-01	WG611956
trans-1,2-Dichloroethene	mg/l	0.0240	0	.025	95.8	45-137	L594224-01	WG611956
trans-1,3-Dichloropropene	mg/l	0.0241	0	.025	96.5	59-130	L594224-01	WG611956
Trichloroethene	mg/l	0.0226	0	.025	90.4	40-155	L594224-01	WG611956
Trichlorofluoromethane	mg/l	0.0245	0	.025	98.1	35-177	L594224-01	WG611956
Vinyl chloride	mg/l	0.0250	0	.025	100.	32-159	L594224-01	WG611956
Xylenes, Total	mg/l	0.0727	0	.075	97.0	64-133	L594224-01	WG611956
4-Bromofluorobenzene					101.2	82-120		WG611956
Dibromofluoromethane					101.7	82-126		WG611956
Toluene-d8					104.3	92-112		WG611956
Mercury	mg/l	0.00298	0	.003	99.3	70-130	L594224-01	WG611975
Ethane	mg/l	0.682	0	.645	106.	70-130	L594625-02	WG612418
Ethene	mg/l	0.655	0	.635	103.	70-130	L594625-02	WG612418
Methane	mg/l	0.339	0	.339	100.	70-130	L594625-02	WG612418

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Level II

L594224

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Alkalinity	mg/l	500.	450.	100	50.0*	80-120	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1880	810.	50	107.	80-120	L593857-04	WG612253
Chloride	mg/l	64.1	15.0	50	98.2	80-120	L594395-01	WG612172
Fluoride	mg/l	4.97	0.110	5	97.2	80-120	L594395-01	WG612172
Sulfate	mg/l	66.1	16.0	50	100.	80-120	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0544	0	.05	109.	75-125	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0538	0.00150	.05	105.	75-125	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0516	0.00370	.05	95.8	75-125	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0628	0.00720	.05	111.	75-125	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	0.0630	1	103.	75-125	L594520-01	WG612985
Boron, Dissolved	mg/l	1.45	0.448	1	100.	75-125	L594520-01	WG612985
Calcium, Dissolved	mg/l	130.	120.	10	100.	75-125	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.02	0	1	102.	75-125	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	0	1	103.	75-125	L594520-01	WG612985
Iron, Dissolved	mg/l	4.87	3.89	1	98.0	75-125	L594520-01	WG612985
Magnesium, Dissolved	mg/l	58.7	48.0	10	107.	75-125	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	0.401	1	103.	75-125	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	0.00390	1	101.	75-125	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.1	8.30	10	98.0	75-125	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.7	12.7	1	100.	75-125	L594520-01	WG612985
Sodium, Dissolved	mg/l	59.0	49.8	10	92.0	75-125	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.20	0.188	1	101.	75-125	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.01	0	1	101.	75-125	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.11	0.0373	1	107.	75-125	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.567	0.0449	.5	104.	75-125	L595020-01	WG613202

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.75	5.38	105.	55-109	6.78	20	L594224-01	WG611964
a,a,a-Trifluorotoluene (FID)				106.4	62-128				WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0233	0.0257	93.1	71-130	9.94	20	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0247	0.0251	98.8	58-137	1.82	20	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0226	0.0235	90.3	64-149	4.00	20	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0222	0.0245	88.8	73-128	10.1	20	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0249	0.0244	99.6	36-159	2.22	21	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0230	0.0241	92.1	58-133	4.51	20	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0243	0.0246	97.2	32-152	1.21	20	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0242	0.0237	96.7	50-140	2.20	20	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0232	0.0255	92.7	68-135	9.40	20	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0236	0.0250	94.2	74-137	5.85	20	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0205	0.0237	82.0	67-133	14.7	20	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0230	0.0250	91.8	67-133	8.29	20	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0223	0.0242	89.0	62-141	8.30	20	L594224-01	WG611956

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YOUR LAB OF CHOICE

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dibromo-3-Chloropropane	mg/l	0.0247	0.0255	98.9	55-148	3.26	22	L594224-01	WG611956	
1,2-Dibromoethane	mg/l	0.0231	0.0255	92.5	71-129	9.58	20	L594224-01	WG611956	
1,2-Dichlorobenzene	mg/l	0.0216	0.0242	86.4	75-125	11.3	20	L594224-01	WG611956	
1,2-Dichloroethane	mg/l	0.0227	0.0247	90.7	59-135	8.68	20	L594224-01	WG611956	
1,2-Dichloropropane	mg/l	0.0222	0.0244	88.8	68-126	9.49	20	L594224-01	WG611956	
1,3,5-Trimethylbenzene	mg/l	0.0231	0.0249	92.2	67-136	7.57	20	L594224-01	WG611956	
1,3-Dichlorobenzene	mg/l	0.0222	0.0239	88.6	69-131	7.47	20	L594224-01	WG611956	
1,3-Dichloropropane	mg/l	0.0218	0.0242	87.3	70-122	10.2	20	L594224-01	WG611956	
1,4-Dichlorobenzene	mg/l	0.0212	0.0237	84.8	70-123	11.2	20	L594224-01	WG611956	
2,2-Dichloropropane	mg/l	0.0240	0.0251	96.0	51-141	4.34	20	L594224-01	WG611956	
2-Butanone (MEK)	mg/l	0.129	0.132	103.	51-149	2.46	22	L594224-01	WG611956	
2-Chloroethyl vinyl ether	mg/l	0.000305	0.000324	0.244*	10-161	6.14	40	L594224-01	WG611956	
2-Chlorotoluene	mg/l	0.0225	0.0243	89.8	65-133	7.84	20	L594224-01	WG611956	
4-Chlorotoluene	mg/l	0.0223	0.0238	89.1	67-129	6.64	20	L594224-01	WG611956	
4-Methyl-2-pentanone (MIBK)	mg/l	0.132	0.135	106.	53-154	2.10	21	L594224-01	WG611956	
Acetone	mg/l	0.113	0.116	90.1	34-146	3.01	22	L594224-01	WG611956	
Acrolein	mg/l	0.127	0.132	102.	10-189	3.76	30	L594224-01	WG611956	
Acrylonitrile	mg/l	0.132	0.135	106.	49-162	1.67	20	L594224-01	WG611956	
Benzene	mg/l	0.0228	0.0240	91.2	51-134	5.04	20	L594224-01	WG611956	
Bromobenzene	mg/l	0.0221	0.0240	88.6	64-130	8.19	20	L594224-01	WG611956	
Bromodichloromethane	mg/l	0.0224	0.0246	89.5	67-132	9.47	20	L594224-01	WG611956	
Bromoform	mg/l	0.0236	0.0254	94.5	59-137	7.35	20	L594224-01	WG611956	
Bromomethane	mg/l	0.0240	0.0260	96.1	23-177	7.94	21	L594224-01	WG611956	
Carbon tetrachloride	mg/l	0.0243	0.0243	97.4	49-140	0.210	20	L594224-01	WG611956	
Chlorobenzene	mg/l	0.0225	0.0241	89.9	69-126	7.08	20	L594224-01	WG611956	
Chlorodibromomethane	mg/l	0.0223	0.0248	89.4	68-130	10.3	20	L594224-01	WG611956	
Chloroethane	mg/l	0.0257	0.0261	103.	32-177	1.63	21	L594224-01	WG611956	
Chloroform	mg/l	0.0234	0.0249	93.7	64-130	5.98	20	L594224-01	WG611956	
Chloromethane	mg/l	0.0235	0.0240	94.0	27-155	2.03	20	L594224-01	WG611956	
cis-1,2-Dichloroethene	mg/l	0.0226	0.0240	90.4	54-137	6.01	20	L594224-01	WG611956	
cis-1,3-Dichloropropene	mg/l	0.0214	0.0238	85.7	63-127	10.7	20	L594224-01	WG611956	
Di-isopropyl ether	mg/l	0.0231	0.0262	92.2	58-133	12.8	20	L594224-01	WG611956	
Dibromomethane	mg/l	0.0232	0.0254	92.9	68-131	8.91	20	L594224-01	WG611956	
Dichlorodifluoromethane	mg/l	0.0249	0.0245	99.6	16-188	1.41	22	L594224-01	WG611956	
Ethylbenzene	mg/l	0.0230	0.0246	92.1	64-135	6.66	20	L594224-01	WG611956	
Hexachloro-1,3-butadiene	mg/l	0.0229	0.0236	91.4	64-140	3.01	20	L594224-01	WG611956	
Isopropylbenzene	mg/l	0.0256	0.0272	102.	62-134	6.18	20	L594224-01	WG611956	
Methyl tert-butyl ether	mg/l	0.0243	0.0270	97.2	55-136	10.4	20	L594224-01	WG611956	
Methylene Chloride	mg/l	0.0216	0.0233	86.2	52-130	7.93	20	L594224-01	WG611956	
n-Butylbenzene	mg/l	0.0225	0.0233	90.0	62-142	3.31	20	L594224-01	WG611956	
n-Propylbenzene	mg/l	0.0229	0.0237	91.7	62-137	3.38	20	L594224-01	WG611956	
Naphthalene	mg/l	0.0235	0.0250	94.2	65-140	5.87	20	L594224-01	WG611956	
p-Isopropyltoluene	mg/l	0.0241	0.0252	96.4	64-142	4.36	20	L594224-01	WG611956	
sec-Butylbenzene	mg/l	0.0236	0.0249	94.3	67-139	5.59	20	L594224-01	WG611956	
Styrene	mg/l	0.0215	0.0238	86.0	58-152	10.1	20	L594224-01	WG611956	
tert-Butylbenzene	mg/l	0.0238	0.0254	95.3	66-139	6.43	20	L594224-01	WG611956	
Tetrachloroethene	mg/l	0.0226	0.0229	90.5	56-139	1.21	20	L594224-01	WG611956	
Toluene	mg/l	0.0228	0.0243	91.2	61-126	6.56	20	L594224-01	WG611956	
trans-1,2-Dichloroethene	mg/l	0.0232	0.0240	92.7	45-137	3.29	20	L594224-01	WG611956	
trans-1,3-Dichloropropene	mg/l	0.0215	0.0241	85.8	59-130	11.7	20	L594224-01	WG611956	
Trichloroethene	mg/l	0.0221	0.0226	88.4	40-155	2.30	20	L594224-01	WG611956	
Trichlorofluoromethane	mg/l	0.0259	0.0245	104.	35-177	5.40	23	L594224-01	WG611956	
Vinyl chloride	mg/l	0.0253	0.0250	101.	32-159	1.11	21	L594224-01	WG611956	
Xylenes, Total	mg/l	0.0681	0.0727	90.8	64-133	6.57	20	L594224-01	WG611956	
4-Bromofluorobenzene				101.7	82-120				WG611956	
Dibromofluoromethane				103.2	82-126				WG611956	
Toluene-d8				103.9	92-112				WG611956	

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/l	0.00299	0.00298	99.7	70-130	0.335	20	L594224-01	WG611975
Ethane	mg/l	0.691	0.682	107.	70-130	1.33	25	L594625-02	WG612418
Ethene	mg/l	0.662	0.655	104.	70-130	1.10	25	L594625-02	WG612418
Methane	mg/l	0.342	0.339	101.	70-130	0.770	25	L594625-02	WG612418
Alkalinity	mg/l	490.	500.	40.0*	80-120	2.02	20	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1830	1880	102.	80-120	2.37	20	L593857-04	WG612253
Chloride	mg/l	64.3	64.1	98.6	80-120	0.312	20	L594395-01	WG612172
Fluoride	mg/l	4.99	4.97	97.6	80-120	0.402	20	L594395-01	WG612172
Sulfate	mg/l	66.1	66.1	100.	80-120	0	20	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0538	0.0544	108.	75-125	1.11	20	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0524	0.0538	102.	75-125	2.64	20	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0514	0.0516	95.4	75-125	0.388	20	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0601	0.0628	106.	75-125	4.39	20	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00281	0.00284	93.7	70-130	1.06	30	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	1.09	103.	75-125	0	20	L594520-01	WG612985
Boron, Dissolved	mg/l	1.46	1.45	101.	75-125	0.687	20	L594520-01	WG612985
Calcium, Dissolved	mg/l	135.	130.	150.*	75-125	3.77	20	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L594520-01	WG612985
Iron, Dissolved	mg/l	4.92	4.87	103.	75-125	1.02	20	L594520-01	WG612985
Magnesium, Dissolved	mg/l	59.1	58.7	111.	75-125	0.679	20	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	1.43	103.	75-125	0	20	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.5	18.1	102.	75-125	2.19	20	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.8	13.7	110.	75-125	0.727	20	L594520-01	WG612985
Sodium, Dissolved	mg/l	60.2	59.0	104.	75-125	2.01	20	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.22	1.20	103.	75-125	1.65	20	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.00	1.01	100.	75-125	0.995	20	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.10	1.11	106.	75-125	0.905	20	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.562	0.567	103.	75-125	0.886	20	L595020-01	WG613202

Batch number /Run number / Sample number cross reference

WG611964: R2339893: L594224-01  
WG611956: R2341093: L594224-01  
WG611975: R2341373: L594224-01  
WG612418: R2344075: L594224-01  
WG612248: R2344113: L594224-01  
WG612245: R2344333: L594224-01  
WG612249: R2344353: L594224-01  
WG612253: R2346533: L594224-01  
WG612480: R2346693: L594224-01

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

WG612172: R2347513: L594224-01  
WG612335: R2348173: L594224-01  
WG612653: R2348277: L594224-01  
WG612880: R2348735: L594224-01  
WG612402: R2348773: L594224-01  
WG612215: R2348778: L594224-01  
WG612486: R2350433: L594224-01  
WG612985: R2350614: L594224-01  
WG613202: R2353153: L594224-01

\* \* 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.'



Encana  
Aaron Stacy  
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Parachute, CO 81635

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September 19, 2012

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.

Billing Information:

Report to: Aaron Stacy

Email to: [astacy@olssonassociates.com](mailto:astacy@olssonassociates.com)

Collected by (signature):  Immediately Packed on Ice N <u>Y</u>	<b>Rush?</b> ( Lab MUST Be Notified ) <input type="checkbox"/> Same Day.....200% <input type="checkbox"/> Next Day.....100% <input type="checkbox"/> Two Day .....50% <input type="checkbox"/> Three Day .....25%	<b>Date Results Needed:</b>	No.  of  C
		Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes	

Analysis/Container/Preservative					
					ALK / ALKBI / ALKCA
					Dissolved Metals
					GRO
					DRO
					RSK175
					TOC
					VOC 8260
					SVOC 8270

Phone: (800) 767-5859  
Phone: (615) 758-5858  
Fax: (615) 758-5859

CoCode ENCRCO (lab use only)  
Template/Prelogin  
Shipped Via:

Remarks/Contaminant	Sample # (lab only)
	L594224-0

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: 200.7 - Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn  
200.8 - Sb, As, Mo, Se - plus Hg

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____		Condition: (P)	(lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp:	Bottles Received:	CoC Seals Intact:	(06) Y N NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	pH Checked:	NCF:
	09/10/12	11000		3.7	17	02	

5040 0618 2560



Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

Billing Information:

Report to:

Aaron Stacy

Email to:

astacy@olssonassociates.com

Analysis/Container/Preservative

Chain of Custody

Page 2 of 2



12065 Lebanon Road  
Mt. Juliet, TN 37122

Phone: (800) 767-5859

Phone: (615) 758-5858

Fax: (615) 758-5859

Project  
Description:

F12E Polyline Release

City/State  
Collected

Silt, Co.

Phone: (970) 263-7800  
FAX:

Client Project #:  
F12E Poly Release

ESC Key:  
ENCRCO

Collected by: Aaron Stacy

Site/Facility ID#: F12E

P.O.#:

Collected by (signature):

**Rush?** ( Lab MUST Be Notified )

Date Results Needed:

Same Day.....200%  
Next Day.....100%  
Two Day.....50%  
Three Day.....25%

Email? ☐ No ☒ Yes

FAX? ☐ No ☐ Yes

No.  
of  
Cntrs

Cl, F, pH, SO4  
Br, Cond, TDS

CoCode ENCRCO (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant

Sample # (lab only)

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Cl, F, pH, SO4	Br, Cond, TDS	Remarks/Contaminant	Sample # (lab only)
GUTH1WW-091012	Grab	GW		09/10/12	1000	2	x	x		L59422419

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

pH Temp

Remarks:

Flow Other

Relinquished by: (Signature)	Date: 09/10/12	Time: 1600	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.7	Bottles Received: 17
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-11-12	Time: 900
				pH Checked:	NCF:



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Wednesday July 18, 2012

Report Number: L583582

Samples Received: 07/06/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:00

ESC Sample # : L583582-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/06/12	1
Chloride	35.	1.0	mg/l	9056	07/06/12	1
Fluoride	1.1	0.10	mg/l	9056	07/06/12	1
Sulfate	550	50.	mg/l	9056	07/10/12	10
Alkalinity	590	100	mg/l	2320B	07/09/12	5
Alkalinity,Bicarbonate	590	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/10/12	1
Methane	BDL	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	7.7		su	9040C	07/09/12	1
Specific Conductance	2200		umhos/cm	9050A	07/14/12	1
TOC (Total Organic Carbon)	6.6	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	1500	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/17/12	1
Arsenic,Dissolved	BDL	0.0010	mg/l	200.8	07/17/12	1
Molybdenum,Dissolved	0.015	0.0020	mg/l	200.8	07/17/12	1
Selenium,Dissolved	0.042	0.0010	mg/l	200.8	07/17/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/12/12	1
Boron,Dissolved	0.32	0.20	mg/l	200.7	07/12/12	1
Calcium,Dissolved	52.	0.50	mg/l	200.7	07/12/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/12/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/12/12	1
Lithium,Dissolved	0.034	0.015	mg/l	200.7	07/12/12	1
Magnesium,Dissolved	22.	0.10	mg/l	200.7	07/12/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/12/12	1
Potassium,Dissolved	3.2	0.50	mg/l	200.7	07/12/12	1
Silicon,Dissolved	4.4	0.20	mg/l	200.7	07/12/12	1
Sodium,Dissolved	440	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	2.3	0.010	mg/l	200.7	07/12/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-01 (PH) - 7.7@17.7c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:00

ESC Sample # : L583582-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/12/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.8		% Rec.	8015D/GRO	07/08/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	07/07/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/07/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/07/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/07/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/07/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/07/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/07/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/07/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/07/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-01 (PH) - 7.7@17.7c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:00

ESC Sample # : L583582-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/07/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/07/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/07/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/07/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/07/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/07/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/07/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/07/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/07/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/07/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/07/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	07/07/12	1
Dibromofluoromethane	107.		% Rec.	8260B	07/07/12	1
4-Bromofluorobenzene	94.4		% Rec.	8260B	07/07/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	102.		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-01 (PH) - 7.7@17.7c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:00

ESC Sample # : L583582-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-01 (PH) - 7.7@17.7c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:00

ESC Sample # : L583582-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	44.1		% Rec.	8270 C	07/10/12	1
Phenol-d5	34.6		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	79.9		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	88.8		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	73.1		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	96.5		% Rec.	8270 C	07/10/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/17/12 15:38 Revised: 07/18/12 17:01  
L583582-01 (PH) - 7.7@17.7c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTIRWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:40

ESC Sample # : L583582-02

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/06/12	1
Chloride	200	20.	mg/l	9056	07/10/12	20
Fluoride	1.2	0.10	mg/l	9056	07/06/12	1
Sulfate	1000	100	mg/l	9056	07/10/12	20
Alkalinity	510	100	mg/l	2320B	07/10/12	5
Alkalinity,Bicarbonate	510	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/10/12	1
Methane	BDL	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	7.9		su	9040C	07/09/12	1
Specific Conductance	3400		umhos/cm	9050A	07/14/12	1
TOC (Total Organic Carbon)	6.2	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	2400	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Arsenic,Dissolved	0.011	0.0010	mg/l	200.8	07/13/12	1
Molybdenum,Dissolved	0.0054	0.0020	mg/l	200.8	07/13/12	1
Selenium,Dissolved	0.45	0.0010	mg/l	200.8	07/13/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.025	0.0050	mg/l	200.7	07/12/12	1
Boron,Dissolved	0.41	0.20	mg/l	200.7	07/12/12	1
Calcium,Dissolved	72.	0.50	mg/l	200.7	07/12/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/12/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/12/12	1
Lithium,Dissolved	0.055	0.015	mg/l	200.7	07/12/12	1
Magnesium,Dissolved	32.	0.10	mg/l	200.7	07/12/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/12/12	1
Potassium,Dissolved	4.5	0.50	mg/l	200.7	07/12/12	1
Silicon,Dissolved	4.7	0.20	mg/l	200.7	07/12/12	1
Sodium,Dissolved	690	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	3.2	0.010	mg/l	200.7	07/12/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-02 (PH) - 7.9@17.4c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTIRWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:40

ESC Sample # : L583582-02

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/12/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.4		% Rec.	8015D/GRO	07/08/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/07/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/07/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/07/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/07/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/07/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/07/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/07/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/07/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/07/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/07/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/07/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-02 (PH) - 7.9@17.4c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTIRWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:40

ESC Sample # : L583582-02

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/07/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/07/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/07/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/07/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/07/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/07/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/07/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/07/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/07/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/07/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/07/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/07/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/07/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/07/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/07/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/07/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	07/07/12	1
Dibromofluoromethane	104.		% Rec.	8260B	07/07/12	1
4-Bromofluorobenzene	93.1		% Rec.	8260B	07/07/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	106.		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-02 (PH) - 7.9@17.4c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : MELTIRWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:40

ESC Sample # : L583582-02

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583582-02 (PH) - 7.9@17.4c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 18, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

ESC Sample # : L583582-02

Sample ID : MELTIRWW-070512

Site ID : F12E

Collected By : Aaron Stacy  
Collection Date : 07/05/12 10:40

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	35.3		% Rec.	8270 C	07/10/12	1
Phenol-d5	28.1		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	70.7		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	79.9		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	59.4		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	86.2		% Rec.	8270 C	07/10/12	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: 07/17/12 15:38 Revised: 07/18/12 17:02  
L583582-02 (PH) - 7.9@17.4c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L583582-01	WG601565	SAMP	pH	R2246534	T8
	WG601602	SAMP	TPH (GC/FID) Low Fraction	R2245433	J5
	WG601490	SAMP	2-Chloroethyl vinyl ether	R2243854	J6J3
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3
L583582-02	WG601565	SAMP	pH	R2246534	T8
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
07/18/12 at 17:02:08

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L583582-01 Account: ENCRCO Received: 07/06/12 09:00 Due Date: 07/13/12 00:00 RPT Date: 07/17/12 15:38

Sample: L583582-02 Account: ENCRCO Received: 07/06/12 09:00 Due Date: 07/18/12 00:00 RPT Date: 07/17/12 15:38

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO  
81505

Alternate billing information:

Report to:

Aaron Stacy

Email to:

astacy@oaconsulting.com

Analysis/Container/Preservative

G016

Chain of Custody  
Page 1 of 2

Prepared by:

 ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Road  
Mt. Juliet, TN 37122

Phone (615) 758-5858

Phone (800) 767-5859

FAX (615) 758-5859

Project  
Description:

F12E Polyline Release

City/State  
Collected

Silt, CO

Phone: 970.263.7800  
FAX:

Client Project #:  
F12E Poly Release

ESC Key:

Collected by: Aaron Stacy

Site/Facility ID#: F12E

P.O.#:

Collected by (signature):

**Rush?** ( Lab MUST Be Notified )

Date Results Needed:

Same Day.....200%  
Next Day.....100%  
Two Day.....50%  
Three Day.....25%

Email? ☐ No ☒ Yes

FAX? ☒ No ☐ Yes

Packed on Ice N ☒ Y

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK, ALKB, ALKCA-500ml No Pres.	DISS METALS-500ml No Pres.	GRO-40ml HCl	DRO-40ml HCl	RSK175-40ml No Pres.	SAR-500ml HNO3 < 2	TOC-250ml HCl < 2	VOC 8260-40ml HCl	Remarks/Contaminant	Sample # (lab only)
MELTWW-070512	Grab	GW	x	07/05/12	1000	1/17	x	x	x	x	x	x	x	x		L583543-01
MELTIRWW-070512	Grab	GW	x	07/05/12	1040	1/17	x	x	x	x	x	x	x	x	*Bottles ID are wrong - MELTIRWW	WRONG -02

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: DISS Metals 300.7 - Ba, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, S, V, Zn  
DISS Metals 300.8 - Sb, As, Mo, Se - plus Hg

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)	Date: 07/05/12	Time: 1700	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.2°C	Bottles Received: 34
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7-6-12	Time: 900
				pH Checked: C2	NCF: X





## Susan Peach

---

**From:** Andy Vann  
**Sent:** Friday, July 13, 2012 4:58 PM  
**To:** Daphne Richards; Login; Reporting  
**Cc:** Jarred Willis; Alan Harvill  
**Subject:** RE: F12E Polyline Release samples L583582

Done.  
Reporting – Please scan email with coc. Thanks

---

**From:** Daphne Richards  
**Sent:** Friday, July 13, 2012 4:29 PM  
**To:** Login ([Login@esclabsciences.com](mailto:Login@esclabsciences.com))  
**Cc:** Jarred Willis; Alan Harvill  
**Subject:** FW: F12E Polyline Release samples L583582

Can we please change the cocode on L583582 from OLSSONCO to ENCRCO. Please scan this email behind the CoC

Thanks

---

**From:** Stacy, Aaron [<mailto:Aaron.Stacy@encana.com>]  
**Sent:** Friday, July 13, 2012 4:13 PM  
**To:** Alan Harvill  
**Subject:** F12E Polyline Release samples

Allen,

Thank you for the help.

The project is F12E Polyline Release and the invoices for these samples need to go to Encana (ENCRCO).

Aaron Stacy  
Olsson Associates

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<http://www.encana.com>



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

Tax I.D. 62-0814289

Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593548

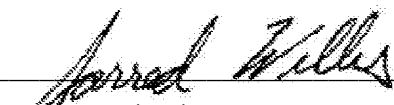
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	34.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.2	0.10	mg/l	9056	09/08/12	1
Sulfate	510	50.	mg/l	9056	09/07/12	10
Alkalinity	580	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	580	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.7		su	9040C	09/11/12	1
Specific Conductance	2300		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	5.5	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	1400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0027	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.012	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.035	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.014	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.38	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	52.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.053	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	23.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	3.2	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.9	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	440	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	2.4	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.055	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.4		% Rec.	8015D/GRO	09/08/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.3		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	0.19	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	62.7		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	53.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	39.1		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	62.9		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	78.2		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	85.1		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-01 (PH) - 7.7@16.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	190	20.	mg/l	9056	09/07/12	20
Sulfate	1000	100	mg/l	9056	09/07/12	20
Fluoride	1.2	0.10	mg/l	300.0	09/10/12	1
Alkalinity	510	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	510	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.9		su	9040C	09/11/12	1
Specific Conductance	2700		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	2400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.018	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.0062	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.44	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.022	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.47	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	73.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.083	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	31.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	4.4	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.4	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	720	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	3.5	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	89.8		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	101.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	54.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	37.4		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	67.7		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.4		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	82.8		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	94.8		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-02 (PH) - 7.9@15.1c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593548-01	WG611870	SAMP	pH	R2339874	T8
	WG611310	SAMP	Bromoform	R2333913	J5
	WG611310	SAMP	2-Chloroethyl vinyl ether	R2333913	J6J3
	WG611581	SAMP	Benzidine	R2340113	J3
L593548-02	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/16/12 at 13:40:13

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593548-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39

Sample: L593548-02 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39





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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG611428	09/07/12 11:04
Ethene	< .013	mg/l			WG611428	09/07/12 11:04
Methane	< .01	mg/l			WG611428	09/07/12 11:04
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Quality Assurance Report  
Level II

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Bromide	< 1	mg/l			WG611270	09/07/12 07:13
Chloride	< 1	mg/l			WG611270	09/07/12 07:13
Sulfate	< 5	mg/l			WG611270	09/07/12 07:13
TOC (Total Organic Carbon)	< 1	mg/l			WG611294	09/07/12 15:38
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
Fluoride	< .1	mg/l			WG611479	09/08/12 07:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611509	09/11/12 17:23
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50

\* Performance of this Analyte is outside of established criteria.

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Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
* Performance of this Analyte is outside of established criteria.						
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'						



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	25.0	25.0		0.401	20	L593591-03	WG611270
Chloride	mg/l	32.0	33.0		2.45	20	L593591-05	WG611270
TOC (Total Organic Carbon)	mg/l	1.80	1.80		0.554	20	L593484-01	WG611294
TOC (Total Organic Carbon)	mg/l	1.50	1.50		1.98	20	L593580-14	WG611294
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Dissolved Solids	mg/l	1100	1070		0.468	5	L593597-01	WG611509
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
Mercury,Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075

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Quality Assurance Report  
Level II

L593548

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Ethane	mg/l	.645	0.712	110.	70-130	WG611428
Ethene	mg/l	.635	0.686	108.	70-130	WG611428
Methane	mg/l	.339	0.363	107.	70-130	WG611428
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Bromide	mg/l	40	40.4	101.	90-110	WG611270
Chloride	mg/l	40	39.3	98.3	90-110	WG611270
Sulfate	mg/l	40	39.5	98.8	90-110	WG611270
TOC (Total Organic Carbon)	mg/l	75	72.2	96.2	85-115	WG611294
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	8.08	101.	90-110	WG611479
TPH (GC/FID) High Fraction o-Terphenyl	ppm	1.5	1.50	100. 100.5	50-150 50-150	WG611577 WG611577
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
pH	su	6.03	6.01	99.7	98-101	WG611870
Dissolved Solids	mg/l	8800	8650	98.3	85-115	WG611509
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581

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Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch
		Known	Val	Result			
Hexachlorobenzene	mg/l	.01		0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01		0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01		0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01		0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01		0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01		0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01		0.00328	32.8	10-96	WG611581
n-Nitrosodiphenylamine	mg/l	.01		0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01		0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01		0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01		0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01		0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01		0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01		0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol					77.84	16-147	WG611581
2-Fluorobiphenyl					70.36	29-127	WG611581
2-Fluorophenol					54.46	10-75	WG611581
Nitrobenzene-d5					66.24	17-119	WG611581
Phenol-d5					35.22	10-63	WG611581
p-Terphenyl-d14					77.90	40-174	WG611581
Mercury, Dissolved	mg/l	.003		0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1		0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1		1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1		1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5		0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1		0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10		10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1		0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10		10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1		1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05		0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05		0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.716	0.712	111.	70-130	0.500	25	WG611428
Ethene	mg/l	0.690	0.686	109.	70-130	0.570	25	WG611428
Methane	mg/l	0.372	0.363	110.	70-130	2.35	25	WG611428
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310
Bromide	mg/l	40.0	40.4	100.		90-110	0.995	20	WG611270
Chloride	mg/l	39.1	39.3	98.0		90-110	0.510	20	WG611270
Sulfate	mg/l	39.2	39.5	98.0		90-110	0.762	20	WG611270
TOC (Total Organic Carbon)	mg/l	74.5	72.2	99.0		85-115	3.23	20	WG611294
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
Fluoride	mg/l	8.06	8.08	101.		90-110	0.248	20	WG611479
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Dissolved Solids	mg/l	8660	8650	98.0		85-115	0.139	5	WG611509
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581

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Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acenaphthene	mg/l	0.00538	0.00619	54.0	37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0	34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0	48-167	15.1	26	WG611581
Benziidine	mg/l	0.00251	0.00157	25.0	10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0	46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0	39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0	39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0	42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0	42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0	10-178	21.9	40	WG611581
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310

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September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310

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Level II

L593548

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Chloride	mg/l	65.5	18.0	50	95.0	80-120	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	56.7	4.60	50	104.	80-120	L593525-01	WG611294
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/l	5.92	0	5.5	108. 105.2	55-109 62-128	L593663-01	WG611405 WG611405
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	4.91	0	5	98.2	80-120	L593917-04	WG611479
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310	
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310	
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310	
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310	
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310	
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310	
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310	
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310	
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310	
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310	
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310	
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310	

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YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Chloride	mg/l	67.5	65.5	99.0	80-120	3.01	20	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	55.8	56.7	102.	80-120	1.72	20	L593525-01	WG611294
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	4.99	4.91	99.8	80-120	1.62	20	L593917-04	WG611479
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611428: R2333855: L593548-01 02

WG611310: R2333913: L593548-01 02

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Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

WG611270: R2334933: L593548-01 02  
WG611294: R2335813: L593548-01 02  
WG611526: R2336033: L593548-01 02  
WG611405: R2337235: L593548-01 02  
WG611718: R2338293: L593548-01 02  
WG611479: R2338776: L593548-01  
WG611577: R2339033: L593548-01 02  
WG611624: R2339313: L593548-02  
WG611870: R2339874: L593548-01 02  
WG611833: R2339913: L593548-01 02  
WG611509: R2339933: L593548-01 02  
WG611835: R2339973: L593548-01 02  
WG611838: R2339993: L593548-01 02  
WG611581: R2340113: L593548-01 02  
WG611391: R2340917: L593548-01 02  
WG612075: R2344074: L593548-01 02  
WG612100: R2347893: L593548-01 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.'





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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.

<b>Company Name/Address</b> <b>Olsson Associates</b> <b>826 21 1/2 Road</b> <b>Grand Junction, CO 81505</b>				<b>Alternate Billing</b> Encana Oil & Gas (USA) Inc. 2717 Cr. 215 Suite 100 Parachute, Co. 81635  ATTN: Charles Jensen				<b>Analysis/Container/Preservative</b>				<b>Chain of Custody</b> Page <u>1</u> of <u>2</u>  Prepared by: <b>E214</b>  <b>ENVIRONMENTAL SCIENCE CORP</b> 12065 Lebanon Road Mt. Juliet TN 37122 Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859	
				Report to: Aaron Stacy E-mail to: astacy@oaconsulting.com									
				<b>Project Description: F12 Poly Release</b>									
PHONE: 970-263-7800 FAX:		<b>Client Project No. F12 Poly Release</b>		<b>Lab Project #</b> ENCRCO									
Collected by: <u>AARON STACY</u>		<b>Site/Facility ID#</b> <u>BELL1WW</u>		<b>P.O.#</b>									
Collected by (signature):		<b>Rush?</b> (Lab MUST be Notified) <input type="checkbox"/> Same Day.....200% <input type="checkbox"/> Next Day.....100% <input type="checkbox"/> Two Day.....50%		<b>Date Results Needed</b>		No _____ of _____ Cntrs							
Packed on Ice <u>N</u> <u>Y</u>				Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes									
<b>Sample ID</b>	<b>Comp/Grab</b>	<b>Matrix</b>	<b>Depth</b>	<b>Date</b>	<b>Time</b>								
BELL1WW-090512	Grab	GW		09/05/12	1110	17	X	X	X	X	X		
BELL2WW-090512	Grab	GW		09/05/12	1130	17	X	X	X	X	X		

\*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT-Other \_\_\_\_\_ **5040 0635 5572** pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: Metals 200.7: Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn, Co Flow \_\_\_\_\_ Other \_\_\_\_\_

Metals 200.8: Sb, As, Mo, Se, Plus Hg

Relinquisher by: (Signature)	Date: <u>09/05/12</u>	Time: _____	Received by: (Signature)	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS _____ Other _____		Condition: <u>JT</u> (lab use only)
Relinquisher by: (Signature) _____	Date: _____	Time: _____	Received by: (Signature) _____	Temp: <u>3.8</u>	Bottles Received: <u>34</u>	pH Checked: <u>2.2</u> NCF: _____
Relinquisher by: (Signature) _____	Date: _____	Time: _____	Received for lab by: (Signature)	Date: <u>9-6-12</u>	Time: <u>0900</u>	

<b>Company Name/Address</b> <b>Olsson Associates</b> <b>826 21 1/2 Road</b> <b>Grand Junction, CO 81505</b>				<b>Alternate Billing</b>  Report to: Aaron Stacy E-mail to: astacy@oaconsulting.com				<b>Analysis/Container/Preservative</b>								Chain of Custody Page <u>2</u> of <u>2</u>				
								Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP</b>  12065 Lebanon Road Mt. Juliet TN 37122  Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859												
<b>Project Description: F12 Poly Release</b>								<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             SAR - 500ml HDPE HNO3              Cl, F, SO4, pH - 500ml HDPE No Pres              Bromide, SPCOND, TDS - 250ml HDPE No Pres           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             2           </div> </div>												
PHONE: 970-263-7800 FAX:		Client Project No. F12 Poly Release		Lab Project # ENCRCO																
Collected by: <u>AARON STACY</u>		Site/Facility ID# <u>BELL1WW</u>		P.O.#																
Collected by(signature):  Packed on Ice N ___ Y ___		<input checked="" type="checkbox"/> <b>Rush?</b> (Lab MUST be Notified) _____ Same Day.....200% _____ Next Day.....100% _____ Two Day.....50%		Date Results Needed Email? ___ No ___ Yes FAX? ___ No ___ Yes		No of Cntrs														
Sample ID		Comp/Grab	Matrix	Depth	Date	Time														
<u>BELL1WW-090512</u>		<u>Grab</u>	<u>GW</u>		<u>09/05/12</u>	<u>1110</u>	<u>17</u>	<u>X</u>	<u>X</u>	<u>X</u>										
<u>BELL2WW-090512</u>		<u>Grab</u>	<u>GW</u>		<u>09/05/12</u>	<u>1130</u>	<u>17</u>	<u>X</u>	<u>X</u>	<u>X</u>										

\*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks:

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquisher by:(Signature) 	Date: <u>09/05/12</u>	Time: <u>1515</u>	Received by:(Signature) 	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other _____		Condition <u>JP</u>	(lab use only)
Relinquisher by:(Signature) 	Date:	Time:	Received by:(Signature) 	Temp: <u>3.8</u>	Bottles Received: <u>34</u>		
Relinquisher by:(Signature)	Date:	Time:	Received for lab by:(Signature) 	Date: <u>9-6-12</u>	Time: <u>0900</u>		



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585012

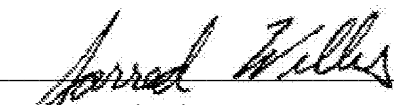
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	64.	1.0	mg/l	9056	07/14/12	1
Fluoride	1.5	0.10	mg/l	9056	07/14/12	1
Sulfate	260	25.	mg/l	9056	07/14/12	5
Alkalinity	620	100	mg/l	2320B	07/18/12	5
Alkalinity,Bicarbonate	620	20.	mg/l	2320B	07/19/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	7.5		su	9040C	07/17/12	1
Specific Conductance	1600		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.0	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	1100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0092	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.0042	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.016	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.090	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	76.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.063	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	46.	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	7.7	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	240	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.7	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585012-01 (PH) - 7.5@21.0c



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L585012-01 (PH) - 7.5@21.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	99.2		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	81.8		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c





12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	47.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	38.0		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	78.2		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	86.4		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	62.4		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	88.3		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585012-01 (PH) - 7.5@21.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585012-01	WG602929	SAMP	pH	R2259213	T8
	WG602751	SAMP	TPH (GC/FID) Low Fraction	R2255773	J5

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
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  
07/29/12 at 12:30:10

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585012-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
Bromide	< 1	mg/l			WG602623	07/14/12 06:07
Chloride	< 1	mg/l			WG602623	07/14/12 06:07
Fluoride	< .1	mg/l			WG602623	07/14/12 06:07
Sulfate	< 5	mg/l			WG602623	07/14/12 06:07
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Level II

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
Alkalinity	< 20	mg/l			WG603112	07/18/12 16:45
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12

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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	14.0	14.0	2.12	20	L585006-04	WG602623
Sulfate	mg/l	34.0	35.0	1.44	20	L585006-04	WG602623
Sulfate	mg/l	360.	360.	1.40	20	L584743-02	WG602623
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Alkalinity	mg/l	620.	620.	0.810	20	L585012-01	WG603112
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Strontium,Dissolved	mg/l	0.150	0.147		0	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720		NA	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340		NA	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50		1.19*	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550		NA	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch		
		Known Val	Result					
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751		
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751		
Bromide	mg/l	40	40.6	102.	90-110	WG602623		
Chloride	mg/l	40	40.4	101.	90-110	WG602623		
Fluoride	mg/l	8	8.44	106.	90-110	WG602623		
Sulfate	mg/l	40	40.3	101.	90-110	WG602623		
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670		
o-Terphenyl				89.92	50-150	WG602670		
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582		
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582		
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582		
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582		
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582		
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582		
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582		
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582		
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582		
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582		
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582		
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582		
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582		
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582		
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582		
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582		
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582		
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582		
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582		
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582		
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582		
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582		
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582		
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582		
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582		
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582		
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582		
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582		
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582		
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582		
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582		

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
Alkalinity	mg/l	100	110.	110.	85-115	WG603112

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		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benzidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
Bromide	mg/l	40.5	40.6	101.	90-110	0.247	20	WG602623
Chloride	mg/l	40.5	40.4	101.	90-110	0.247	20	WG602623
Fluoride	mg/l	8.44	8.44	106.	90-110	0	20	WG602623
Sulfate	mg/l	40.3	40.3	101.	90-110	0	20	WG602623
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037

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Est. 1970

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
Alkalinity	mg/l	100.	110.	100.	85-115	9.52	20	WG603112
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benziidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzybutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Chloride	mg/l	52.0	0	50	104.	80-120	L584988-04	WG602623
Sulfate	mg/l	53.7	0	50	107.	80-120	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582

\* Performance of this Analyte is outside of established criteria.

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



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Quality Assurance Report  
Level II

L585012

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

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Alkalinity	mg/l	1700	1300	500	80.0	80-120	L584999-01	WG603112
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226

\* Performance of this Analyte is outside of established criteria.

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226

Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Chloride	mg/l	51.6	52.0	103.	80-120	0.772	20	L584988-04	WG602623
Sulfate	mg/l	53.2	53.7	106.	80-120	0.935	20	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L585012

July 29, 2012

Analyte	Units	MSD	Matrix Spike	Duplicate	Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582



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Tax I.D. 62-0814289

Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Thursday September 13, 2012

Report Number: L593597

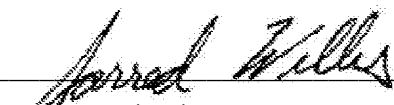
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 13, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : ESGA1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:15

ESC Sample # : L593597-01

Site ID : ESGA1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	64.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.5	0.10	mg/l	9056	09/10/12	1
Sulfate	300	25.	mg/l	9056	09/07/12	5
Alkalinity	560	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	560	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.4		su	9040C	09/11/12	1
Specific Conductance	1900		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	1100	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/12/12	1
Arsenic,Dissolved	0.0040	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.0031	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.017	0.0010	mg/l	200.8	09/12/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.096	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	86.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.066	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	53.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	8.0	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	270	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	3.1	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593597-01 (PH) - 7.4@14.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 13, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : ESGA1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:15

ESC Sample # : L593597-01

Site ID : ESGA1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.067	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.5		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593597-01 (PH) - 7.4@14.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 13, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : ESGA1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:15

ESC Sample # : L593597-01

Site ID : ESGA1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	99.9		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	92.2		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	109.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	118.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593597-01 (PH) - 7.4@14.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 13, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : ESGA1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:15

ESC Sample # : L593597-01

Site ID : ESGA1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593597-01 (PH) - 7.4@14.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 13, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : ESGA1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:15

ESC Sample # : L593597-01

Site ID : ESGA1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	58.4		% Rec.	8270 C	09/10/12	1
Phenol-d5	40.6		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	64.0		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	71.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	71.1		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	85.1		% Rec.	8270 C	09/10/12	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: 09/13/12 15:17 Printed: 09/13/12 15:18  
L593597-01 (PH) - 7.4@14.6c



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593597-01	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/13/12 at 15:18:22

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593597-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/13/12 15:17



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593597

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

September 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

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Quality Assurance Report  
Level II

L593597

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611509	09/11/12 17:23
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50

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Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Antimony,Dissolved	< .001	mg/l			WG612094	09/12/12 12:35
Selenium,Dissolved	< .001	mg/l			WG612094	09/12/12 12:35

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Est. 1970

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Dissolved Solids	mg/l	1100	1070		0.468	5	L593597-01	WG611509
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858
Mercury,Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Antimony,Dissolved	mg/l	0	0.000770		NA	20	L593334-05	WG612094
Selenium,Dissolved	mg/l	0.00860	0.00750		13.4	20	L593334-05	WG612094

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Barium,Dissolved	mg/l	0.0330	0.0342	3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533	NA	0	L593221-01	WG612075
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310

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Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577

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Encana  
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2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593597

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
pH	su	6.03	6.01	99.7	98-101	WG611870
Dissolved Solids	mg/l	8800	8650	98.3	85-115	WG611509
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury, Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Antimony, Dissolved	mg/l	.05	0.0530	106.	85-115	WG612094
Selenium, Dissolved	mg/l	.05	0.0464	92.8	85-115	WG612094
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1	1.07	107.	85-115	WG612075

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310

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**YOUR LAB OF CHOICE**

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

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Level II

L593597

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Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.		55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.		78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.		82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0		69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0		77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.		78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.		77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0		78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0		79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0		63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.		58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0		26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.		78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.		78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0		58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0		49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0		10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0		53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0		72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.		76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0		75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.		61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.		42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0		63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.		78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.		73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0		52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0		76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0		50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0		75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0		74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0		66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.		77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0		33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.		77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.		71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.		74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0		67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0		67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0		74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.		77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.		70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.		77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.		77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.		69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.		76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.		69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.		75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.		63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.		69-124	1.79	20	WG611310
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Dissolved Solids	mg/l	8660	8650	98.0		85-115	0.139	5	WG611509
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0		34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0		48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0		10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0		46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0		39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0		39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0		42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0		42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0		10-178	21.9	40	WG611581

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Quality Assurance Report  
Level II

L593597

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421

TPH (GC/FID) Low Fraction mg/l 5.92 0 5.5 108. 55-109 L593663-01 WG611405

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
a,a,a-Trifluorotoluene(FID)					105.2	62-128		
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Antimony,Dissolved	mg/l	0.0585	0.000770	.05	115.	75-125	L593334-05	WG612094
Selenium,Dissolved	mg/l	0.0658	0.00750	.05	117.	75-125	L593334-05	WG612094
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310

\* 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

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593597

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

September 13, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421

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Tax I.D. 62-0814289

Est. 1970

September 13, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Antimony,Dissolved	mg/l	0.0571	0.0585	113.	75-125	2.42	20	L593334-05	WG612094
Selenium,Dissolved	mg/l	0.0666	0.0658	118.	75-125	1.21	20	L593334-05	WG612094
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075

Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593597-01  
WG611471: R2334493: L593597-01  
WG611421: R2334814: L593597-01  
WG611526: R2336033: L593597-01  
WG611405: R2337235: L593597-01  
WG611718: R2338293: L593597-01  
WG611577: R2339033: L593597-01  
WG611624: R2339313: L593597-01  
WG611870: R2339874: L593597-01  
WG611833: R2339913: L593597-01  
WG611509: R2339933: L593597-01  
WG611835: R2339973: L593597-01  
WG611838: R2339993: L593597-01

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WG611581: R2340113: L593597-01  
WG611858: R2340713: L593597-01  
WG611391: R2340917: L593597-01  
WG612094: R2343418: L593597-01  
WG612075: R2344074: L593597-01

\* \* Calculations are performed prior to rounding of reported values.  
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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.

Operator: Encana

Facility 429326

Location SWSE 7 6S 92W

Garfield County

**Abatement or Corrective Actions:**

1. Submit a written engineering evaluation of the pipeline failure, and actions to be taken to prevent a repeat occurrences
2. Provide a work plan for an investigation into possible impacts from the release including
  - A. a desktop and field reconnaissance well search to identify both permitted and unpermitted domestic water wells, springs, ponds and other water features downgradient of the release location,
  - B. Sampling program to collect samples from the Guthrie well, Schultz well, and Janice Hunt spring utilizing the COGCC analytical suite (below), no later than July 10, 2012 to evaluate possible impacts to wells and spring(s) after infiltration time.
  - C. An additional sampling event for the 3 features is required by September 10, 2012.
  - D. Water features identified in the well search shall be sampled when identified and again by September 10, 2012 if they are located between the release location and the northern edge of NESE Section 27 6S 92W 6th meridian.
  - E. A comprehensive, interpretive report summarizing the investigation and results is due by October 15, 2012.
  - F. Sampling plan for collection of a sample representative of the E&P waste released and analysis for the suite attached.
3. Provide list of downstream Davis Ditch and Dry Hollow users with contact dates and user response .
4. If COGCC analytical sampling results indicate an impact, additional sampling may be required.
5. Provide pipeline testing records.

## NOAV # 200355205 Attachment

page 2 of 2

Operator: Encana

Facility 429326

Location SWSE 7 6S 92W

Garfield County

## COGCC Analytical Suite:

Analysis	Method	Analyte list
SPECIFIC CONDUCTIVITY	EPA120.1	
PH	EPA150.1	
TOTAL DISSOLVED SOLIDS	EPA160.1	
Dissolved METALS - ICP	EPA200.7	BARIUM BORON CALCIUM CHROMIUM COBALT COPPER IRON LITHIUM MAGNESIUM MANGANESE NICKEL POTASSIUM SILICON SODIUM STRONTIUM VANADIUM ZINC
Dissolved Metals	EPA200.8	ANTIMONY ARSENIC MOLYBDENUM SELENIUM URANIUM
Alkalinity	EPA310.1	BICARBONATE AS CaCO <sub>3</sub> CARBONATE AS CaCO <sub>3</sub> HYDROXIDE TOTAL ALKALINITY AS CaCO <sub>3</sub>
Mercury	E245.1	
Inorganic anions	EPA300.0	BROMIDE CHLORIDE FLUORIDE SULFATE
Dissolved methane	RSK175	ETHANE ETHENE METHANE
GASOLINE RANGE ORGANICS	SW8015	
DIESEL RANGE ORGANICS	SW8015MCALUFT	
Semi-VOAs	SW8270	
VOAs	SW8260	
SODIUM ADSORPTION RATIO	lab calculated	
Total Organic Carbon	Method 413.1	
field observation:	sediment (present or absent)	
field observation:	odor	
field observation:	effervescence	
field observation:	particulates (present or absent, color)	
field observation:	color	
field reading:	temperature	
field reading:	volume/rate of purging	

Environmental Science Corp.  
 Login Confirmation Report  
 Jul 15 2012, 08:03 am  
 Login Number: L585068 Template Number: N/A  
 Account: ENCANACO EnCana Oil & Gas Inc. - CO

Report To: Chris Hines / Matt Kasten	Client Project #: F12E PIPELINE SPILL	TSR:358
: 2717 County Road 215, Suite 100	Project Description:	Payment Terms: Net 30
:	PO#:	Regulatory State: CO
: Parachute, CO, 81635	PO# Required: N	Fax Report: N
Telephone #: 970-285-2653	Lab Project #: ENCANACO-910LIST	Quote#:
Fax #: 970-625-4636	Client Design: DEFAULT	Report Design:
Email: , christopher.hines@encana.com; mkasten@walshenv.com		

Project/Account Comments: Try not to report benzene as BDL above a 250x dilution.

ONLY log soil samples under this account. Waters get logged under ENCRCO. Log all PAHs as PAHSIM.

Lab Sample #	Test	Sample ID	Desc.	Collect Date & Time	Collected By	Site	Receive Date	PR	Est.DueDate(1)	Method	Unit Price
L585068-01		F12E PIPELINE SPILL SOIL		13-Jul-12, 10:45	Charlie	F12E	14-JUL-12	R5	20-JUL-12		
F12E Pipeline Spill											
SS	P BTEXGRO/DRO		BTEXGRO/DRO								\$ 60.00
SS	C BTEXGRO		BTEX/GRO	13713292		4ozClr-NoPres	DEFAULT		8021/8015		\$ 0.00
SS	C DRO		TPH High Fraction -DRO	13713294		4ozClr-NoPres	DEFAULT		8015M		\$ 0.00
SS	S CR3		Chromium,Trivalent	13713294		4ozClr-NoPres	DEFAULT		Calc.		\$ 0.00
SS	P CR6SS		Chromium-Hexavalent, pH and ORP								\$ 70.00
SS	C CR6		Chromium,Hexavalent	13713294		4ozClr-NoPres	DEFAULT		3060A/7196A		\$ 0.00
SS	C ORP		ORP	13713294		4ozClr-NoPres	DEFAULT		SM2580B		\$ 0.00
SS	C PH		pH	13713292		4ozClr-NoPres	DEFAULT		9045D		\$ 0.00
SS	S CUICP		Copper	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00
Misc	S DISPOSAL		Sample Disposal Charge								\$ 0.00
Misc	S ENERGY		Energy Surcharge								\$ 0.00
Misc	S HARDCOPY		Hardcopy Report Charge								\$ 0.00
SS	P MRCRA8		RCRA Metals								\$ 70.00
SS	C AGICP		Silver	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C ASICP		Arsenic	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C BAICP		Barium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C CDICP		Cadmium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C CRICP		Chromium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C HG		Mercury	13713292		4ozClr-NoPres	DEFAULT		7471A		\$ 0.00
SS	C PBICP		Lead by 6010B	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C SEICP		Selenium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
Misc	S MTLPREP		Metals Prep Fee per Set								\$ 0.00
SS	S NIICP		Nickel	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00
Misc	S SAMPLEKIT		Sample Kit / Supplies Fee								\$ 0.00
SS	S SAR		Sodium Adsorption Ratio				DEFAULT		Calc.		\$ 40.00
Misc	S SHIPPING		Inbound Transport Charge								\$ 0.00
SS	S SPCON		Specific Conductance	13713294		4ozClr-NoPres	DEFAULT		9050AMod		\$ 10.00
SS	S SV8270PAHSIM		PAHs by SIM	13713293		4ozClr-NoPres	DEFAULT		8270C-SIM		\$ 65.00
SS	S ZNICP		Zinc	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00

Not An Invoice! Do Not Pay

Total: \$ 339.00



12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Tuesday September 18, 2012

Report Number: L595515

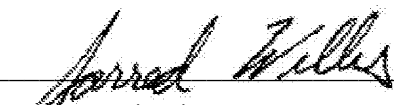
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 18, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHE1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:50

ESC Sample # : L595515-01

Site ID : SCHE1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	09/18/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/18/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/18/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromodichloromethane	0.0022	0.0010	mg/l	8260B	09/18/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/18/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/18/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/18/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/18/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/18/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/18/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/18/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/18/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/18/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 18, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHE1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:50

ESC Sample # : L595515-01

Site ID : SCHE1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/18/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/18/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/18/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/18/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/18/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/18/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/18/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/18/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	09/18/12	1
Dibromofluoromethane	102.		% Rec.	8260B	09/18/12	1
4-Bromofluorobenzene	95.3		% Rec.	8260B	09/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/18/12 11:09 Printed: 09/18/12 11:09

Summary of Remarks For Samples Printed  
09/18/12 at 11:09:51

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L595515-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/24/12 00:00 RPT Date: 09/18/12 11:09  
Relogged from L593525-01. VOCs go OOH on Wednesday, 9/19



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

12065 Lebanon Rd.  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,1-Trichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2-Trichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,4-Trichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,4-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG613116	09/17/12 22:26
1,2-Dibromoethane	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,3,5-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,3-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,3-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,4-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
2,2-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
2-Butanone (MEK)	< .01	mg/l			WG613116	09/17/12 22:26
2-Chloroethyl vinyl ether	< .05	mg/l			WG613116	09/17/12 22:26
2-Chlorotoluene	< .001	mg/l			WG613116	09/17/12 22:26
4-Chlorotoluene	< .001	mg/l			WG613116	09/17/12 22:26
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG613116	09/17/12 22:26
Acetone	< .05	mg/l			WG613116	09/17/12 22:26
Acrolein	< .025	mg/l			WG613116	09/17/12 22:26
Acrylonitrile	< .01	mg/l			WG613116	09/17/12 22:26
Benzene	< .001	mg/l			WG613116	09/17/12 22:26
Bromobenzene	< .001	mg/l			WG613116	09/17/12 22:26
Bromodichloromethane	< .001	mg/l			WG613116	09/17/12 22:26
Bromoform	< .001	mg/l			WG613116	09/17/12 22:26
Bromomethane	< .005	mg/l			WG613116	09/17/12 22:26
Carbon tetrachloride	< .001	mg/l			WG613116	09/17/12 22:26
Chlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
Chlorodibromomethane	< .001	mg/l			WG613116	09/17/12 22:26
Chloroethane	< .005	mg/l			WG613116	09/17/12 22:26
Chloroform	< .005	mg/l			WG613116	09/17/12 22:26
Chloromethane	< .0025	mg/l			WG613116	09/17/12 22:26
cis-1,2-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
cis-1,3-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
Di-isopropyl ether	< .001	mg/l			WG613116	09/17/12 22:26
Dibromomethane	< .001	mg/l			WG613116	09/17/12 22:26
Dichlorodifluoromethane	< .005	mg/l			WG613116	09/17/12 22:26
Ethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Hexachloro-1,3-butadiene	< .001	mg/l			WG613116	09/17/12 22:26
Isopropylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Methyl tert-butyl ether	< .001	mg/l			WG613116	09/17/12 22:26
Methylene Chloride	< .005	mg/l			WG613116	09/17/12 22:26
n-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
n-Propylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Naphthalene	< .005	mg/l			WG613116	09/17/12 22:26
p-Isopropyltoluene	< .001	mg/l			WG613116	09/17/12 22:26
sec-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Styrene	< .001	mg/l			WG613116	09/17/12 22:26
tert-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Quality Assurance Report  
Level II

L595515

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Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG613116	09/17/12 22:26
Toluene	< .005	mg/l			WG613116	09/17/12 22:26
trans-1,2-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
trans-1,3-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
Trichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
Trichlorofluoromethane	< .005	mg/l			WG613116	09/17/12 22:26
Vinyl chloride	< .001	mg/l			WG613116	09/17/12 22:26
Xylenes, Total	< .003	mg/l			WG613116	09/17/12 22:26
4-Bromofluorobenzene		% Rec.	102.9	82-120	WG613116	09/17/12 22:26
Dibromofluoromethane		% Rec.	100.3	82-126	WG613116	09/17/12 22:26
Toluene-d8		% Rec.	101.3	92-112	WG613116	09/17/12 22:26

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	114.	77-128	WG613116
1,1,1-Trichloroethane	mg/l	.025	0.0272	109.	71-126	WG613116
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0263	105.	78-130	WG613116
1,1,2-Trichloroethane	mg/l	.025	0.0261	105.	81-121	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0305	122.	53-143	WG613116
1,1-Dichloroethane	mg/l	.025	0.0257	103.	73-123	WG613116
1,1-Dichloroethene	mg/l	.025	0.0292	117.	54-134	WG613116
1,1-Dichloropropene	mg/l	.025	0.0259	103.	67-127	WG613116
1,2,3-Trichlorobenzene	mg/l	.025	0.0284	114.	77-130	WG613116
1,2,3-Trichloropropane	mg/l	.025	0.0293	117.	68-130	WG613116
1,2,3-Trimethylbenzene	mg/l	.025	0.0265	106.	77-126	WG613116
1,2,4-Trichlorobenzene	mg/l	.025	0.0280	112.	76-127	WG613116
1,2,4-Trimethylbenzene	mg/l	.025	0.0281	112.	77-129	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0248	99.1	55-142	WG613116
1,2-Dibromoethane	mg/l	.025	0.0263	105.	78-124	WG613116
1,2-Dichlorobenzene	mg/l	.025	0.0270	108.	82-121	WG613116
1,2-Dichloroethane	mg/l	.025	0.0252	101.	69-128	WG613116
1,2-Dichloropropane	mg/l	.025	0.0242	97.0	77-121	WG613116
1,3,5-Trimethylbenzene	mg/l	.025	0.0281	112.	78-127	WG613116
1,3-Dichlorobenzene	mg/l	.025	0.0289	116.	77-127	WG613116
1,3-Dichloropropane	mg/l	.025	0.0244	97.5	78-117	WG613116
1,4-Dichlorobenzene	mg/l	.025	0.0255	102.	79-117	WG613116
2,2-Dichloropropane	mg/l	.025	0.0293	117.	63-130	WG613116
2-Butanone (MEK)	mg/l	.125	0.133	107.	58-144	WG613116
2-Chloroethyl vinyl ether	mg/l	.125	0.110	88.0	26-172	WG613116
2-Chlorotoluene	mg/l	.025	0.0272	109.	78-123	WG613116
4-Chlorotoluene	mg/l	.025	0.0278	111.	78-122	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.127	101.	58-147	WG613116
Acetone	mg/l	.125	0.132	106.	49-153	WG613116
Acrolein	mg/l	.125	0.125	99.8	10-181	WG613116
Acrylonitrile	mg/l	.125	0.126	101.	53-153	WG613116
Benzene	mg/l	.025	0.0241	96.5	72-119	WG613116
Bromobenzene	mg/l	.025	0.0272	109.	76-121	WG613116
Bromodichloromethane	mg/l	.025	0.0265	106.	75-127	WG613116
Bromoform	mg/l	.025	0.0284	114.	61-136	WG613116
Bromomethane	mg/l	.025	0.0301	121.	42-172	WG613116
Carbon tetrachloride	mg/l	.025	0.0267	107.	63-129	WG613116
Chlorobenzene	mg/l	.025	0.0264	106.	78-123	WG613116
Chlorodibromomethane	mg/l	.025	0.0268	107.	73-128	WG613116
Chloroethane	mg/l	.025	0.0273	109.	52-164	WG613116
Chloroform	mg/l	.025	0.0267	107.	76-122	WG613116
Chloromethane	mg/l	.025	0.0240	95.8	50-141	WG613116
cis-1,2-Dichloroethene	mg/l	.025	0.0257	103.	75-121	WG613116
cis-1,3-Dichloropropene	mg/l	.025	0.0251	101.	74-124	WG613116

\* 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**

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

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

September 18, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Di-isopropyl ether	mg/l	.025	0.0238	95.1	66-129	WG613116
Dibromomethane	mg/l	.025	0.0266	106.	77-124	WG613116
Dichlorodifluoromethane	mg/l	.025	0.0278	111.	33-173	WG613116
Ethylbenzene	mg/l	.025	0.0272	109.	77-124	WG613116
Hexachloro-1,3-butadiene	mg/l	.025	0.0289	116.	71-134	WG613116
Isopropylbenzene	mg/l	.025	0.0276	110.	74-126	WG613116
Methyl tert-butyl ether	mg/l	.025	0.0257	103.	67-127	WG613116
Methylene Chloride	mg/l	.025	0.0240	96.1	67-122	WG613116
n-Butylbenzene	mg/l	.025	0.0277	111.	74-130	WG613116
n-Propylbenzene	mg/l	.025	0.0275	110.	77-125	WG613116
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG613116
p-Isopropyltoluene	mg/l	.025	0.0304	121.	77-132	WG613116
sec-Butylbenzene	mg/l	.025	0.0279	111.	77-130	WG613116
Styrene	mg/l	.025	0.0280	112.	69-145	WG613116
tert-Butylbenzene	mg/l	.025	0.0299	119.	76-131	WG613116
Tetrachloroethene	mg/l	.025	0.0257	103.	69-131	WG613116
Toluene	mg/l	.025	0.0233	93.2	75-114	WG613116
trans-1,2-Dichloroethene	mg/l	.025	0.0270	108.	63-127	WG613116
trans-1,3-Dichloropropene	mg/l	.025	0.0261	104.	69-124	WG613116
Trichloroethene	mg/l	.025	0.0249	99.6	69-131	WG613116
Trichlorofluoromethane	mg/l	.025	0.0289	116.	53-161	WG613116
Vinyl chloride	mg/l	.025	0.0270	108.	55-142	WG613116
Xylenes, Total	mg/l	.075	0.0802	107.	77-123	WG613116
4-Bromofluorobenzene				101.3	82-120	WG613116
Dibromofluoromethane				102.8	82-126	WG613116
Toluene-d8				99.93	92-112	WG613116

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,1,2-Tetrachloroethane	mg/l	0.0292	0.0286	117.	77-128	2.16	20	WG613116
1,1,1-Trichloroethane	mg/l	0.0257	0.0272	103.	71-126	5.56	20	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0275	0.0263	110.	78-130	4.73	20	WG613116
1,1,2-Trichloroethane	mg/l	0.0285	0.0261	114.	81-121	8.73	20	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0285	0.0305	114.	53-143	6.59	20	WG613116
1,1-Dichloroethane	mg/l	0.0249	0.0257	100.	73-123	3.17	20	WG613116
1,1-Dichloroethene	mg/l	0.0274	0.0292	110.	54-134	6.37	20	WG613116
1,1-Dichloropropene	mg/l	0.0236	0.0259	94.0	67-127	9.07	20	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0282	0.0284	113.	77-130	0.870	20	WG613116
1,2,3-Trichloropropane	mg/l	0.0295	0.0293	118.	68-130	0.620	20	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0259	0.0265	104.	77-126	2.41	20	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0281	0.0280	112.	76-127	0.520	20	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0290	0.0281	116.	77-129	3.26	20	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0248	106.	55-142	6.46	20	WG613116
1,2-Dibromoethane	mg/l	0.0278	0.0263	111.	78-124	5.38	20	WG613116
1,2-Dichlorobenzene	mg/l	0.0269	0.0270	108.	82-121	0.500	20	WG613116
1,2-Dichloroethane	mg/l	0.0245	0.0252	98.0	69-128	2.79	20	WG613116
1,2-Dichloropropane	mg/l	0.0236	0.0242	94.0	77-121	2.55	20	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0290	0.0281	116.	78-127	3.28	20	WG613116
1,3-Dichlorobenzene	mg/l	0.0293	0.0289	117.	77-127	1.23	20	WG613116
1,3-Dichloropropane	mg/l	0.0254	0.0244	102.	78-117	4.16	20	WG613116
1,4-Dichlorobenzene	mg/l	0.0245	0.0255	98.0	79-117	3.70	20	WG613116
2,2-Dichloropropane	mg/l	0.0272	0.0293	109.	63-130	7.23	20	WG613116
2-Butanone (MEK)	mg/l	0.126	0.133	101.	58-144	5.29	20	WG613116
2-Chloroethyl vinyl ether	mg/l	0.105	0.110	84.0	26-172	4.92	22	WG613116
2-Chlorotoluene	mg/l	0.0286	0.0272	114.	78-123	5.09	20	WG613116
4-Chlorotoluene	mg/l	0.0282	0.0278	113.	78-122	1.54	20	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.128	0.127	102.	58-147	1.03	20	WG613116
Acetone	mg/l	0.130	0.132	104.	49-153	1.59	21	WG613116

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
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Parachute, CO 81635

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Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Acrolein	mg/l	0.124	0.125	99.0	10-181	0.640	30	WG613116
Acrylonitrile	mg/l	0.127	0.126	101.	53-153	0.280	20	WG613116
Benzene	mg/l	0.0235	0.0241	94.0	72-119	2.82	20	WG613116
Bromobenzene	mg/l	0.0276	0.0272	110.	76-121	1.55	20	WG613116
Bromodichloromethane	mg/l	0.0253	0.0265	101.	75-127	4.77	20	WG613116
Bromoform	mg/l	0.0305	0.0284	122.	61-136	6.99	20	WG613116
Bromomethane	mg/l	0.0276	0.0301	110.	42-172	8.65	20	WG613116
Carbon tetrachloride	mg/l	0.0234	0.0267	93.0	63-129	13.3	20	WG613116
Chlorobenzene	mg/l	0.0270	0.0264	108.	78-123	1.96	20	WG613116
Chlorodibromomethane	mg/l	0.0282	0.0268	113.	73-128	5.07	20	WG613116
Chloroethane	mg/l	0.0265	0.0273	106.	52-164	2.83	20	WG613116
Chloroform	mg/l	0.0257	0.0267	103.	76-122	3.75	20	WG613116
Chloromethane	mg/l	0.0232	0.0240	93.0	50-141	3.21	20	WG613116
cis-1,2-Dichloroethene	mg/l	0.0245	0.0257	98.0	75-121	4.64	20	WG613116
cis-1,3-Dichloropropene	mg/l	0.0248	0.0251	99.0	74-124	1.57	20	WG613116
Di-isopropyl ether	mg/l	0.0227	0.0238	91.0	66-129	4.77	20	WG613116
Dibromomethane	mg/l	0.0264	0.0266	105.	77-124	0.960	20	WG613116
Dichlorodifluoromethane	mg/l	0.0268	0.0278	107.	33-173	3.66	20	WG613116
Ethylbenzene	mg/l	0.0269	0.0272	107.	77-124	1.16	20	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0277	0.0289	111.	71-134	4.55	20	WG613116
Isopropylbenzene	mg/l	0.0282	0.0276	113.	74-126	2.25	20	WG613116
Methyl tert-butyl ether	mg/l	0.0254	0.0257	102.	67-127	1.12	20	WG613116
Methylene Chloride	mg/l	0.0235	0.0240	94.0	67-122	2.26	20	WG613116
n-Butylbenzene	mg/l	0.0263	0.0277	105.	74-130	5.04	20	WG613116
n-Propylbenzene	mg/l	0.0281	0.0275	112.	77-125	2.18	20	WG613116
Naphthalene	mg/l	0.0264	0.0263	105.	70-134	0.180	20	WG613116
p-Isopropyltoluene	mg/l	0.0306	0.0304	122.	77-132	0.680	20	WG613116
sec-Butylbenzene	mg/l	0.0289	0.0279	115.	77-130	3.47	20	WG613116
Styrene	mg/l	0.0283	0.0280	113.	69-145	1.05	20	WG613116
tert-Butylbenzene	mg/l	0.0295	0.0299	118.	76-131	1.06	20	WG613116
Tetrachloroethene	mg/l	0.0272	0.0257	109.	69-131	5.64	20	WG613116
Toluene	mg/l	0.0229	0.0233	92.0	75-114	1.67	20	WG613116
trans-1,2-Dichloroethene	mg/l	0.0260	0.0270	104.	63-127	3.57	20	WG613116
trans-1,3-Dichloropropene	mg/l	0.0269	0.0261	108.	69-124	2.93	20	WG613116
Trichloroethene	mg/l	0.0239	0.0249	95.0	69-131	4.24	20	WG613116
Trichlorofluoromethane	mg/l	0.0270	0.0289	108.	53-161	7.05	20	WG613116
Vinyl chloride	mg/l	0.0257	0.0270	103.	55-142	4.69	20	WG613116
Xylenes, Total	mg/l	0.0821	0.0802	110.	77-123	2.36	20	WG613116
4-Bromofluorobenzene				108.4	82-120			WG613116
Dibromofluoromethane				100.4	82-126			WG613116
Toluene-d8				100.8	92-112			WG613116

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0266	0	.025	106.	71-130	L595452-05	WG613116
1,1,1-Trichloroethane	mg/l	0.0261	0	.025	104.	58-137	L595452-05	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0266	0.000644	.025	104.	64-149	L595452-05	WG613116
1,1,2-Trichloroethane	mg/l	0.0249	0	.025	99.5	73-128	L595452-05	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0303	0	.025	121.	36-159	L595452-05	WG613116
1,1-Dichloroethane	mg/l	0.0249	0	.025	99.7	58-133	L595452-05	WG613116
1,1-Dichloroethene	mg/l	0.0287	0	.025	115.	32-152	L595452-05	WG613116
1,1-Dichloropropene	mg/l	0.0240	0	.025	95.9	50-140	L595452-05	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0271	0	.025	108.	68-135	L595452-05	WG613116
1,2,3-Trichloropropane	mg/l	0.0292	0	.025	117.	74-137	L595452-05	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0285	0.00310	.025	102.	67-133	L595452-05	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0272	0	.025	109.	67-133	L595452-05	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0271	0.000680	.025	105.	62-141	L595452-05	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0302	0.00288	.025	109.	55-148	L595452-05	WG613116

\* Performance of this Analyte is outside of established criteria.

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dibromoethane	mg/l	0.0252	0	.025	101.	71-129	L595452-05	WG613116
1,2-Dichlorobenzene	mg/l	0.0259	0	.025	103.	75-125	L595452-05	WG613116
1,2-Dichloroethane	mg/l	0.0245	0	.025	98.2	59-135	L595452-05	WG613116
1,2-Dichloropropane	mg/l	0.0238	0	.025	95.3	68-126	L595452-05	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0262	0	.025	105.	67-136	L595452-05	WG613116
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L595452-05	WG613116
1,3-Dichloropropane	mg/l	0.0228	0	.025	91.4	70-122	L595452-05	WG613116
1,4-Dichlorobenzene	mg/l	0.0240	0	.025	96.2	70-123	L595452-05	WG613116
2,2-Dichloropropane	mg/l	0.0280	0	.025	112.	51-141	L595452-05	WG613116
2-Butanone (MEK)	mg/l	0.0933	0	.125	74.6	51-149	L595452-05	WG613116
2-Chloroethyl vinyl ether	mg/l	0	0	.125	0*	10-161	L595452-05	WG613116
2-Chlorotoluene	mg/l	0.0259	0	.025	104.	65-133	L595452-05	WG613116
4-Chlorotoluene	mg/l	0.0261	0.000314	.025	103.	67-129	L595452-05	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.130	0	.125	104.	53-154	L595452-05	WG613116
Acetone	mg/l	0.0634	0.00307	.125	48.3	34-146	L595452-05	WG613116
Acrolein	mg/l	0.108	0	.125	86.3	10-189	L595452-05	WG613116
Acrylonitrile	mg/l	0.127	0	.125	101.	49-162	L595452-05	WG613116
Benzene	mg/l	0.0234	0.000510	.025	91.5	51-134	L595452-05	WG613116
Bromobenzene	mg/l	0.0252	0.000697	.025	98.1	64-130	L595452-05	WG613116
Bromodichloromethane	mg/l	0.0247	0	.025	98.8	67-132	L595452-05	WG613116
Bromoform	mg/l	0.0274	0	.025	110.	59-137	L595452-05	WG613116
Bromomethane	mg/l	0.0255	0	.025	102.	23-177	L595452-05	WG613116
Carbon tetrachloride	mg/l	0.0247	0	.025	98.9	49-140	L595452-05	WG613116
Chlorobenzene	mg/l	0.0247	0	.025	99.0	69-126	L595452-05	WG613116
Chlorodibromomethane	mg/l	0.0261	0	.025	104.	68-130	L595452-05	WG613116
Chloroethane	mg/l	0.0254	0	.025	102.	32-177	L595452-05	WG613116
Chloroform	mg/l	0.0246	0	.025	98.5	64-130	L595452-05	WG613116
Chloromethane	mg/l	0.0227	0	.025	90.7	27-155	L595452-05	WG613116
cis-1,2-Dichloroethene	mg/l	0.0239	0	.025	95.4	54-137	L595452-05	WG613116
cis-1,3-Dichloropropene	mg/l	0.0236	0	.025	94.6	63-127	L595452-05	WG613116
Di-isopropyl ether	mg/l	0.0227	0	.025	90.6	58-133	L595452-05	WG613116
Dibromomethane	mg/l	0.0258	0	.025	103.	68-131	L595452-05	WG613116
Dichlorodifluoromethane	mg/l	0.0272	0	.025	109.	16-188	L595452-05	WG613116
Ethylbenzene	mg/l	0.0340	0.00790	.025	104.	64-135	L595452-05	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0273	0	.025	109.	64-140	L595452-05	WG613116
Isopropylbenzene	mg/l	0.0290	0.00220	.025	107.	62-134	L595452-05	WG613116
Methyl tert-butyl ether	mg/l	0.0250	0	.025	100.	55-136	L595452-05	WG613116
Methylene Chloride	mg/l	0.0218	0	.025	87.1	52-130	L595452-05	WG613116
n-Butylbenzene	mg/l	0.0271	0.000816	.025	105.	62-142	L595452-05	WG613116
n-Propylbenzene	mg/l	0.0329	0.00661	.025	105.	62-137	L595452-05	WG613116
Naphthalene	mg/l	0.0392	0.0120	.025	109.	65-140	L595452-05	WG613116
p-Isopropyltoluene	mg/l	0.0281	0	.025	112.	64-142	L595452-05	WG613116
sec-Butylbenzene	mg/l	0.0277	0.00107	.025	106.	67-139	L595452-05	WG613116
Styrene	mg/l	0.0260	0	.025	104.	58-152	L595452-05	WG613116
tert-Butylbenzene	mg/l	0.0274	0	.025	110.	66-139	L595452-05	WG613116
Tetrachloroethene	mg/l	0.0245	0	.025	97.9	56-139	L595452-05	WG613116
Toluene	mg/l	0.0231	0	.025	92.3	61-126	L595452-05	WG613116
trans-1,2-Dichloroethene	mg/l	0.0257	0	.025	103.	45-137	L595452-05	WG613116
trans-1,3-Dichloropropene	mg/l	0.0257	0.000633	.025	100.	59-130	L595452-05	WG613116
Trichloroethene	mg/l	0.0236	0	.025	94.3	40-155	L595452-05	WG613116
Trichlorofluoromethane	mg/l	0.0281	0	.025	112.	35-177	L595452-05	WG613116
Vinyl chloride	mg/l	0.0249	0	.025	99.6	32-159	L595452-05	WG613116
Xylenes, Total	mg/l	0.0761	0	.075	101.	64-133	L595452-05	WG613116
4-Bromofluorobenzene					101.9	82-120		WG613116
Dibromofluoromethane					101.6	82-126		WG613116
Toluene-d8					99.82	92-112		WG613116

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





YOUR LAB OF CHOICE

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0266	112.	71-130	5.38	20	L595452-05	WG613116
1,1,1-Trichloroethane	mg/l	0.0260	0.0261	104.	58-137	0.570	20	L595452-05	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0271	0.0266	106.	64-149	1.95	20	L595452-05	WG613116
1,1,2-Trichloroethane	mg/l	0.0263	0.0249	105.	73-128	5.48	20	L595452-05	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0283	0.0303	113.	36-159	6.59	21	L595452-05	WG613116
1,1-Dichloroethane	mg/l	0.0237	0.0249	94.9	58-133	4.90	20	L595452-05	WG613116
1,1-Dichloroethene	mg/l	0.0282	0.0287	113.	32-152	1.99	20	L595452-05	WG613116
1,1-Dichloropropene	mg/l	0.0234	0.0240	93.7	50-140	2.31	20	L595452-05	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0275	0.0271	110.	68-135	1.21	20	L595452-05	WG613116
1,2,3-Trichloropropane	mg/l	0.0282	0.0292	113.	74-137	3.40	20	L595452-05	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0286	0.0285	102.	67-133	0.270	20	L595452-05	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0270	0.0272	108.	67-133	0.640	20	L595452-05	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0271	111.	62-141	5.15	20	L595452-05	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0332	0.0302	121.	55-148	9.39	22	L595452-05	WG613116
1,2-Dibromoethane	mg/l	0.0263	0.0252	105.	71-129	4.30	20	L595452-05	WG613116
1,2-Dichlorobenzene	mg/l	0.0275	0.0259	110.	75-125	6.20	20	L595452-05	WG613116
1,2-Dichloroethane	mg/l	0.0243	0.0245	97.3	59-135	0.860	20	L595452-05	WG613116
1,2-Dichloropropane	mg/l	0.0225	0.0238	90.0	68-126	5.72	20	L595452-05	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0269	0.0262	107.	67-136	2.48	20	L595452-05	WG613116
1,3-Dichlorobenzene	mg/l	0.0272	0.0266	109.	69-131	2.24	20	L595452-05	WG613116
1,3-Dichloropropane	mg/l	0.0242	0.0228	96.8	70-122	5.79	20	L595452-05	WG613116
1,4-Dichlorobenzene	mg/l	0.0242	0.0240	96.8	70-123	0.610	20	L595452-05	WG613116
2,2-Dichloropropane	mg/l	0.0271	0.0280	108.	51-141	3.43	20	L595452-05	WG613116
2-Butanone (MEK)	mg/l	0.0910	0.0933	72.8	51-149	2.45	22	L595452-05	WG613116
2-Chloroethyl vinyl ether	mg/l	0	0	0*	10-161	0	40	L595452-05	WG613116
2-Chlorotoluene	mg/l	0.0268	0.0259	107.	65-133	3.10	20	L595452-05	WG613116
4-Chlorotoluene	mg/l	0.0272	0.0261	108.	67-129	3.96	20	L595452-05	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.126	0.130	101.	53-154	2.89	21	L595452-05	WG613116
Acetone	mg/l	0.0621	0.0634	47.2	34-146	2.15	22	L595452-05	WG613116
Acrolein	mg/l	0.109	0.108	87.3	10-189	1.13	30	L595452-05	WG613116
Acrylonitrile	mg/l	0.126	0.127	100.	49-162	0.780	20	L595452-05	WG613116
Benzene	mg/l	0.0232	0.0234	90.6	51-134	0.910	20	L595452-05	WG613116
Bromobenzene	mg/l	0.0264	0.0252	103.	64-130	4.68	20	L595452-05	WG613116
Bromodichloromethane	mg/l	0.0248	0.0247	99.2	67-132	0.400	20	L595452-05	WG613116
Bromoform	mg/l	0.0279	0.0274	112.	59-137	1.78	20	L595452-05	WG613116
Bromomethane	mg/l	0.0264	0.0255	105.	23-177	3.20	21	L595452-05	WG613116
Carbon tetrachloride	mg/l	0.0250	0.0247	99.9	49-140	0.980	20	L595452-05	WG613116
Chlorobenzene	mg/l	0.0254	0.0247	102.	69-126	2.56	20	L595452-05	WG613116
Chlorodibromomethane	mg/l	0.0273	0.0261	109.	68-130	4.62	20	L595452-05	WG613116
Chloroethane	mg/l	0.0248	0.0254	99.0	32-177	2.52	21	L595452-05	WG613116
Chloroform	mg/l	0.0242	0.0246	96.7	64-130	1.80	20	L595452-05	WG613116
Chloromethane	mg/l	0.0221	0.0227	88.4	27-155	2.48	20	L595452-05	WG613116
cis-1,2-Dichloroethene	mg/l	0.0238	0.0239	95.2	54-137	0.280	20	L595452-05	WG613116
cis-1,3-Dichloropropene	mg/l	0.0237	0.0236	94.7	63-127	0.130	20	L595452-05	WG613116
Di-isopropyl ether	mg/l	0.0224	0.0227	89.5	58-133	1.27	20	L595452-05	WG613116
Dibromomethane	mg/l	0.0258	0.0258	103.	68-131	0.0800	20	L595452-05	WG613116
Dichlorodifluoromethane	mg/l	0.0269	0.0272	108.	16-188	0.960	22	L595452-05	WG613116
Ethylbenzene	mg/l	0.0351	0.0340	109.	64-135	3.04	20	L595452-05	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0253	0.0273	101.	64-140	7.63	20	L595452-05	WG613116
Isopropylbenzene	mg/l	0.0299	0.0290	111.	62-134	3.08	20	L595452-05	WG613116
Methyl tert-butyl ether	mg/l	0.0248	0.0250	99.2	55-136	0.880	20	L595452-05	WG613116
Methylene Chloride	mg/l	0.0219	0.0218	87.4	52-130	0.390	20	L595452-05	WG613116
n-Butylbenzene	mg/l	0.0268	0.0271	104.	62-142	1.32	20	L595452-05	WG613116
n-Propylbenzene	mg/l	0.0340	0.0329	110.	62-137	3.17	20	L595452-05	WG613116
Naphthalene	mg/l	0.0407	0.0392	115.	65-140	3.65	20	L595452-05	WG613116
p-Isopropyltoluene	mg/l	0.0281	0.0281	112.	64-142	0.0100	20	L595452-05	WG613116
sec-Butylbenzene	mg/l	0.0282	0.0277	108.	67-139	1.95	20	L595452-05	WG613116
Styrene	mg/l	0.0263	0.0260	105.	58-152	1.15	20	L595452-05	WG613116
tert-Butylbenzene	mg/l	0.0283	0.0274	113.	66-139	2.94	20	L595452-05	WG613116
Tetrachloroethene	mg/l	0.0249	0.0245	99.7	56-139	1.81	20	L595452-05	WG613116

\* Performance of this Analyte is outside of established criteria.

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



Encana  
 Aaron Stacy  
 2717 Co. Rd. 215, Ste 100  
 Parachute, CO 81635

Quality Assurance Report  
 Level II

L595515

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

September 18, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Toluene	mg/l	0.0222	0.0231	89.0	61-126	3.68	20	L595452-05	WG613116
trans-1,2-Dichloroethene	mg/l	0.0249	0.0257	99.6	45-137	3.11	20	L595452-05	WG613116
trans-1,3-Dichloropropene	mg/l	0.0244	0.0257	95.1	59-130	5.27	20	L595452-05	WG613116
Trichloroethene	mg/l	0.0235	0.0236	93.8	40-155	0.520	20	L595452-05	WG613116
Trichlorofluoromethane	mg/l	0.0276	0.0281	110.	35-177	1.82	23	L595452-05	WG613116
Vinyl chloride	mg/l	0.0248	0.0249	99.3	32-159	0.370	21	L595452-05	WG613116
Xylenes, Total	mg/l	0.0771	0.0761	103.	64-133	1.29	20	L595452-05	WG613116
4-Bromofluorobenzene				102.8	82-120				WG613116
Dibromofluoromethane				99.65	82-126				WG613116
Toluene-d8				98.47	92-112				WG613116

Batch number /Run number / Sample number cross reference

WG613116: R2350435: L595515-01

\* \* 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.'



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 18, 2012

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.



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Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Wednesday September 19, 2012

Report Number: L594224

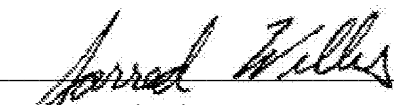
Samples Received: 09/11/12

Client Project: F12E POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/14/12	1
Chloride	74.	1.0	mg/l	9056	09/14/12	1
Fluoride	0.46	0.10	mg/l	9056	09/14/12	1
Sulfate	1500	250	mg/l	9056	09/15/12	50
Alkalinity	450	100	mg/l	2320B	09/13/12	5
Alkalinity,Bicarbonate	450	20.	mg/l	2320B	09/13/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/13/12	1
Methane	BDL	0.010	mg/l	RSK175	09/13/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/13/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/13/12	1
pH	7.5		su	9040C	09/14/12	1
Specific Conductance	3000		umhos/cm	9050A	09/16/12	1
TOC (Total Organic Carbon)	5.4	1.0	mg/l	9060A	09/13/12	1
Dissolved Solids	2600	10.	mg/l	2540C	09/18/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/17/12	1
Arsenic,Dissolved	0.0015	0.0010	mg/l	200.8	09/17/12	1
Molybdenum,Dissolved	0.0037	0.0020	mg/l	200.8	09/17/12	1
Selenium,Dissolved	0.0072	0.0010	mg/l	200.8	09/17/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/17/12	1
Barium,Dissolved	0.012	0.0050	mg/l	200.7	09/17/12	1
Boron,Dissolved	0.37	0.20	mg/l	200.7	09/17/12	1
Calcium,Dissolved	270	0.50	mg/l	200.7	09/17/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/17/12	1
Lithium,Dissolved	0.048	0.016	mg/l	200.7	09/19/12	1.1
Magnesium,Dissolved	170	0.10	mg/l	200.7	09/17/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Potassium,Dissolved	6.6	0.50	mg/l	200.7	09/17/12	1
Silicon,Dissolved	5.2	0.20	mg/l	200.7	09/17/12	1
Sodium,Dissolved	250	0.50	mg/l	200.7	09/17/12	1
Strontium,Dissolved	6.4	0.010	mg/l	200.7	09/17/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Zinc,Dissolved	0.31	0.030	mg/l	200.7	09/17/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/11/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	8015D/GRO	09/11/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/12/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/12/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/12/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/12/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/12/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/12/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/12/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/12/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/12/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/12/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/12/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	09/12/12	1
Dibromofluoromethane	107.		% Rec.	8260B	09/12/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	09/12/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/14/12	1
Surrogate recovery(%)						
o-Terphenyl	103.		% Rec.	3511/8015	09/14/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/16/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/16/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c





12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Surrogate Recovery						
2-Fluorophenol	64.0		% Rec.	8270 C	09/16/12	1
Phenol-d5	48.6		% Rec.	8270 C	09/16/12	1
Nitrobenzene-d5	90.5		% Rec.	8270 C	09/16/12	1
2-Fluorobiphenyl	103.		% Rec.	8270 C	09/16/12	1
2,4,6-Tribromophenol	78.8		% Rec.	8270 C	09/16/12	1
p-Terphenyl-d14	109.		% Rec.	8270 C	09/16/12	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.

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Reported: 09/19/12 13:10 Printed: 09/19/12 13:11

L594224-01 (PH) - 7.5@18.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L594224-01	WG612480	SAMP	pH	R2346693	T8
	WG612248	SAMP	Alkalinity	R2344113	J6
	WG611956	SAMP	Acetone	R2341093	J4
	WG611956	SAMP	2-Chloroethyl vinyl ether	R2341093	J6

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/19/12 at 13:11:09

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L594224-01 Account: ENCRCO Received: 09/11/12 09:00 Due Date: 09/18/12 00:00 RPT Date: 09/19/12 13:10  
Added HGD and SIDICP. Deleted HG. Per JW. AV 9/14



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

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Level II

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611964	09/11/12 11:58
a,a,a-Trifluorotoluene(FID)		% Rec.	99.42	62-128	WG611964	09/11/12 11:58
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,1-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611956	09/12/12 02:13
1,2-Dibromoethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,3,5-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,4-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
2,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
2-Butanone (MEK)	< .01	mg/l			WG611956	09/12/12 02:13
2-Chloroethyl vinyl ether	< .05	mg/l			WG611956	09/12/12 02:13
2-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611956	09/12/12 02:13
Acetone	< .05	mg/l			WG611956	09/12/12 02:13
Acrolein	< .025	mg/l			WG611956	09/12/12 02:13
Acrylonitrile	< .01	mg/l			WG611956	09/12/12 02:13
Benzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromodichloromethane	< .001	mg/l			WG611956	09/12/12 02:13
Bromoform	< .001	mg/l			WG611956	09/12/12 02:13
Bromomethane	< .005	mg/l			WG611956	09/12/12 02:13
Carbon tetrachloride	< .001	mg/l			WG611956	09/12/12 02:13
Chlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Chlorodibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Chloroethane	< .005	mg/l			WG611956	09/12/12 02:13
Chloroform	< .005	mg/l			WG611956	09/12/12 02:13
Chloromethane	< .0025	mg/l			WG611956	09/12/12 02:13
cis-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
cis-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Di-isopropyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Dibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Dichlorodifluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Ethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Hexachloro-1,3-butadiene	< .001	mg/l			WG611956	09/12/12 02:13
Isopropylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Methyl tert-butyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Methylene Chloride	< .005	mg/l			WG611956	09/12/12 02:13
n-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
n-Propylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Naphthalene	< .005	mg/l			WG611956	09/12/12 02:13

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Quality Assurance Report  
Level II

L594224

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
p-Isopropyltoluene	< .001	mg/l			WG611956	09/12/12 02:13
sec-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Styrene	< .001	mg/l			WG611956	09/12/12 02:13
tert-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Tetrachloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Toluene	< .005	mg/l			WG611956	09/12/12 02:13
trans-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
trans-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Trichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Trichlorofluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Vinyl chloride	< .001	mg/l			WG611956	09/12/12 02:13
Xylenes, Total	< .003	mg/l			WG611956	09/12/12 02:13
4-Bromofluorobenzene		% Rec.	99.13	82-120	WG611956	09/12/12 02:13
Dibromofluoromethane		% Rec.	104.3	82-126	WG611956	09/12/12 02:13
Toluene-d8		% Rec.	103.7	92-112	WG611956	09/12/12 02:13
Mercury	< .0002	mg/l			WG611975	09/12/12 11:29
Ethane	< .013	mg/l			WG612418	09/13/12 13:12
Ethene	< .013	mg/l			WG612418	09/13/12 13:12
Methane	< .01	mg/l			WG612418	09/13/12 13:12
Alkalinity	< 20	mg/l			WG612248	09/13/12 10:21
TOC (Total Organic Carbon)	< 1	mg/l			WG612253	09/13/12 09:27
Bromide	< 1	mg/l			WG612172	09/14/12 21:43
Chloride	< 1	mg/l			WG612172	09/14/12 21:43
Fluoride	< .1	mg/l			WG612172	09/14/12 21:43
Sulfate	< 5	mg/l			WG612172	09/14/12 21:43
1,2,4-Trichlorobenzene	< .01	mg/l			WG612335	09/16/12 12:43
2,4,6-Trichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dimethylphenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2,6-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2-Chloronaphthalene	< .001	mg/l			WG612335	09/16/12 12:43
2-Chlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
3,3-Dichlorobenzidine	< .01	mg/l			WG612335	09/16/12 12:43
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Bromophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Chloro-3-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Chlorophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
Acenaphthene	< .001	mg/l			WG612335	09/16/12 12:43
Acenaphthylene	< .001	mg/l			WG612335	09/16/12 12:43
Anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzidine	< .01	mg/l			WG612335	09/16/12 12:43
Benzo(a)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(a)pyrene	< .001	mg/l			WG612335	09/16/12 12:43

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(b)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(g,h,i)perylene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(k)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzylbutyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethoxy)methane	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Chrysene	< .001	mg/l			WG612335	09/16/12 12:43
Di-n-butyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Di-n-octyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dibenz(a,h)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Diethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dimethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Fluorene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachloro-1,3-butadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachlorobenzene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachlorocyclopentadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachloroethane	< .01	mg/l			WG612335	09/16/12 12:43
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG612335	09/16/12 12:43
Isophorone	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodi-n-propylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodimethylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodiphenylamine	< .01	mg/l			WG612335	09/16/12 12:43
Naphthalene	< .001	mg/l			WG612335	09/16/12 12:43
Nitrobenzene	< .01	mg/l			WG612335	09/16/12 12:43
Pentachlorophenol	< .001	mg/l			WG612335	09/16/12 12:43
Phenanthrene	< .001	mg/l			WG612335	09/16/12 12:43
Phenol	< .01	mg/l			WG612335	09/16/12 12:43
Pyrene	< .001	mg/l			WG612335	09/16/12 12:43
2,4,6-Tribromophenol		% Rec.	54.44	16-147	WG612335	09/16/12 12:43
2-Fluorobiphenyl		% Rec.	66.96	29-127	WG612335	09/16/12 12:43
2-Fluorophenol		% Rec.	36.74	10-75	WG612335	09/16/12 12:43
Nitrobenzene-d5		% Rec.	61.08	17-119	WG612335	09/16/12 12:43
Phenol-d5		% Rec.	30.33	10-63	WG612335	09/16/12 12:43
p-Terphenyl-d14		% Rec.	78.70	40-174	WG612335	09/16/12 12:43
Specific Conductance	4.71	umhos/cm			WG612653	09/16/12 09:29
Antimony,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Arsenic,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Molybdenum,Dissolved	< .002	mg/l			WG612880	09/17/12 03:28
Selenium,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Mercury,Dissolved	< .0002	mg/l			WG612402	09/17/12 11:46
TPH (GC/FID) High Fraction	< .1	ppm			WG612215	09/14/12 19:14
o-Terphenyl		% Rec.	100.4	50-150	WG612215	09/14/12 19:14
Dissolved Solids	< 10	mg/l			WG612486	09/18/12 10:34
Barium,Dissolved	< .005	mg/l			WG612985	09/18/12 00:11

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Calcium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Chromium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Copper,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Iron,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Magnesium,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Manganese,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Nickel,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Potassium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Silicon,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Sodium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Strontium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Vanadium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Zinc,Dissolved	< .03	mg/l			WG612985	09/18/12 00:11
Lithium,Dissolved	< .015	mg/l			WG613202	09/19/12 08:29

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury	mg/l	0	0		0	20	L594224-01	WG611975
Alkalinity	mg/l	300.	290.		2.39	20	L594221-01	WG612248
Alkalinity	mg/l	0	0		0	20	L594275-03	WG612248
TOC (Total Organic Carbon)	mg/l	2300	2300		1.76	20	L593857-03	WG612253
TOC (Total Organic Carbon)	mg/l	32.0	32.0		0.156	20	L594524-07	WG612253
pH	su	7.50	7.50		0.267	1	L594224-01	WG612480
pH	su	7.90	7.90		0.253	1	L594643-02	WG612480
Chloride	mg/l	10.0	11.0		4.65	20	L594275-04	WG612172
Sulfate	mg/l	8.10	8.10		0	20	L594275-04	WG612172
Sulfate	mg/l	35.0	35.0		0.286	20	L594374-10	WG612172
Specific Conductance	umhos/cm	910.	910.		0.439	20	L594221-01	WG612653
Specific Conductance	umhos/cm	410.	410.		0.489	20	L595027-02	WG612653
Antimony,Dissolved	mg/l	0	0		0	20	L594224-01	WG612880
Arsenic,Dissolved	mg/l	0.00140	0.00150		4.08	20	L594224-01	WG612880
Molybdenum,Dissolved	mg/l	0.00370	0.00370		1.08*	0	L594224-01	WG612880
Selenium,Dissolved	mg/l	0.00800	0.00720		10.3	20	L594224-01	WG612880
Mercury,Dissolved	mg/l	0	0		0	20	L594224-01	WG612402
Dissolved Solids	mg/l	2600	2550		0.0392	5	L594224-01	WG612486
Barium,Dissolved	mg/l	0.0640	0.0630		1.26	20	L594520-01	WG612985
Boron,Dissolved	mg/l	0.460	0.448		2.64*	0	L594520-01	WG612985

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	120.	120.	1.65	20	L594520-01	WG612985
Chromium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Copper,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Iron,Dissolved	mg/l	4.00	3.89	2.79	20	L594520-01	WG612985
Magnesium,Dissolved	mg/l	50.0	48.0	3.08	20	L594520-01	WG612985
Manganese,Dissolved	mg/l	0.410	0.401	2.46	20	L594520-01	WG612985
Nickel,Dissolved	mg/l	0	0.00390	NA	20	L594520-01	WG612985
Potassium,Dissolved	mg/l	8.30	8.30	0.481	20	L594520-01	WG612985
Silicon,Dissolved	mg/l	13.0	12.7	3.10*	0	L594520-01	WG612985
Sodium,Dissolved	mg/l	50.0	49.8	0.201	20	L594520-01	WG612985
Strontium,Dissolved	mg/l	0.190	0.188	0.533	20	L594520-01	WG612985
Vanadium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Zinc,Dissolved	mg/l	0.0370	0.0373	1.62	20	L594520-01	WG612985
Lithium,Dissolved	mg/l	0.0470	0.0449	4.14	20	L595020-01	WG613202

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	5.77	105.	70-124	WG611964
a,a,a-Trifluorotoluene(FID)				107.7	62-128	WG611964
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0263	105.	77-128	WG611956
1,1,1-Trichloroethane	mg/l	.025	0.0254	102.	71-126	WG611956
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.2	78-130	WG611956
1,1,2-Trichloroethane	mg/l	.025	0.0248	99.3	81-121	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0257	103.	53-143	WG611956
1,1-Dichloroethane	mg/l	.025	0.0242	96.9	73-123	WG611956
1,1-Dichloroethene	mg/l	.025	0.0248	99.1	54-134	WG611956
1,1-Dichloropropene	mg/l	.025	0.0247	98.9	67-127	WG611956
1,2,3-Trichlorobenzene	mg/l	.025	0.0266	106.	77-130	WG611956
1,2,3-Trichloropropane	mg/l	.025	0.0265	106.	68-130	WG611956
1,2,3-Trimethylbenzene	mg/l	.025	0.0234	93.6	77-126	WG611956
1,2,4-Trichlorobenzene	mg/l	.025	0.0271	108.	76-127	WG611956
1,2,4-Trimethylbenzene	mg/l	.025	0.0253	101.	77-129	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0270	108.	55-142	WG611956
1,2-Dibromoethane	mg/l	.025	0.0260	104.	78-124	WG611956
1,2-Dichlorobenzene	mg/l	.025	0.0245	98.2	82-121	WG611956
1,2-Dichloroethane	mg/l	.025	0.0252	101.	69-128	WG611956
1,2-Dichloropropane	mg/l	.025	0.0247	98.6	77-121	WG611956
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG611956
1,3-Dichlorobenzene	mg/l	.025	0.0251	100.	77-127	WG611956
1,3-Dichloropropane	mg/l	.025	0.0247	98.7	78-117	WG611956
1,4-Dichlorobenzene	mg/l	.025	0.0245	97.9	79-117	WG611956
2,2-Dichloropropane	mg/l	.025	0.0259	104.	63-130	WG611956
2-Butanone (MEK)	mg/l	.125	0.171	137.	58-144	WG611956
2-Chloroethyl vinyl ether	mg/l	.125	0.146	117.	26-172	WG611956
2-Chlorotoluene	mg/l	.025	0.0250	99.8	78-123	WG611956
4-Chlorotoluene	mg/l	.025	0.0248	99.1	78-122	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.146	117.	58-147	WG611956
Acetone	mg/l	.125	0.200	160.*	49-153	WG611956
Acrolein	mg/l	.125	0.0700	56.0	10-181	WG611956
Acrylonitrile	mg/l	.125	0.140	112.	53-153	WG611956
Benzene	mg/l	.025	0.0238	95.3	72-119	WG611956
Bromobenzene	mg/l	.025	0.0244	97.6	76-121	WG611956
Bromodichloromethane	mg/l	.025	0.0245	98.0	75-127	WG611956
Bromoform	mg/l	.025	0.0261	105.	61-136	WG611956

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromomethane	mg/l	.025	0.0257	103.	42-172	WG611956
Carbon tetrachloride	mg/l	.025	0.0245	98.2	63-129	WG611956
Chlorobenzene	mg/l	.025	0.0242	96.9	78-123	WG611956
Chlorodibromomethane	mg/l	.025	0.0252	101.	73-128	WG611956
Chloroethane	mg/l	.025	0.0260	104.	52-164	WG611956
Chloroform	mg/l	.025	0.0250	100.	76-122	WG611956
Chloromethane	mg/l	.025	0.0243	97.1	50-141	WG611956
cis-1,2-Dichloroethene	mg/l	.025	0.0242	96.7	75-121	WG611956
cis-1,3-Dichloropropene	mg/l	.025	0.0247	98.8	74-124	WG611956
Di-isopropyl ether	mg/l	.025	0.0256	102.	66-129	WG611956
Dibromomethane	mg/l	.025	0.0257	103.	77-124	WG611956
Dichlorodifluoromethane	mg/l	.025	0.0243	97.3	33-173	WG611956
Ethylbenzene	mg/l	.025	0.0248	99.3	77-124	WG611956
Hexachloro-1,3-butadiene	mg/l	.025	0.0248	99.2	71-134	WG611956
Isopropylbenzene	mg/l	.025	0.0276	110.	74-126	WG611956
Methyl tert-butyl ether	mg/l	.025	0.0271	108.	67-127	WG611956
Methylene Chloride	mg/l	.025	0.0238	95.4	67-122	WG611956
n-Butylbenzene	mg/l	.025	0.0250	99.9	74-130	WG611956
n-Propylbenzene	mg/l	.025	0.0248	99.1	77-125	WG611956
Naphthalene	mg/l	.025	0.0267	107.	70-134	WG611956
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG611956
sec-Butylbenzene	mg/l	.025	0.0256	102.	77-130	WG611956
Styrene	mg/l	.025	0.0256	102.	69-145	WG611956
tert-Butylbenzene	mg/l	.025	0.0257	103.	76-131	WG611956
Tetrachloroethene	mg/l	.025	0.0243	97.2	69-131	WG611956
Toluene	mg/l	.025	0.0242	96.7	75-114	WG611956
trans-1,2-Dichloroethene	mg/l	.025	0.0240	96.1	63-127	WG611956
trans-1,3-Dichloropropene	mg/l	.025	0.0243	97.4	69-124	WG611956
Trichloroethene	mg/l	.025	0.0235	94.0	69-131	WG611956
Trichlorofluoromethane	mg/l	.025	0.0254	102.	53-161	WG611956
Vinyl chloride	mg/l	.025	0.0255	102.	55-142	WG611956
Xylenes, Total	mg/l	.075	0.0748	99.7	77-123	WG611956
4-Bromofluorobenzene				101.6	82-120	WG611956
Dibromofluoromethane				102.3	82-126	WG611956
Toluene-d8				103.1	92-112	WG611956
Mercury	mg/l	.003	0.00290	96.7	85-115	WG611975
Ethane	mg/l	.645	0.737	114.	70-130	WG612418
Ethene	mg/l	.635	0.706	111.	70-130	WG612418
Methane	mg/l	.339	0.373	110.	70-130	WG612418
Alkalinity	mg/l	100	94.0	94.0	85-115	WG612248
TOC (Total Organic Carbon)	mg/l	75	74.1	98.8	85-115	WG612253
pH	su	6.03	6.03	100.	98-101	WG612480
Bromide	mg/l	40	39.8	99.5	90-110	WG612172
Chloride	mg/l	40	39.7	99.3	90-110	WG612172
Fluoride	mg/l	8	7.92	99.0	90-110	WG612172
Sulfate	mg/l	40	38.6	96.5	90-110	WG612172

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00694	69.4	18-130	WG612335
2,4,6-Trichlorophenol	mg/l	.01	0.00702	70.2	12-147	WG612335
2,4-Dichlorophenol	mg/l	.01	0.00764	76.4	10-157	WG612335
2,4-Dimethylphenol	mg/l	.01	0.00819	81.9	19-160	WG612335
2,4-Dinitrophenol	mg/l	.01	0.00492	49.2	10-135	WG612335
2,4-Dinitrotoluene	mg/l	.01	0.00821	82.1	30-168	WG612335
2,6-Dinitrotoluene	mg/l	.01	0.00854	85.4	32-163	WG612335
2-Chloronaphthalene	mg/l	.01	0.00761	76.1	29-149	WG612335
2-Chlorophenol	mg/l	.01	0.00654	65.4	16-129	WG612335
2-Nitrophenol	mg/l	.01	0.00815	81.5	14-158	WG612335
3,3-Dichlorobenzidine	mg/l	.01	0.00909	90.9	42-150	WG612335
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00606	60.6	10-164	WG612335
4-Bromophenyl-phenylether	mg/l	.01	0.00778	77.8	40-166	WG612335
4-Chloro-3-methylphenol	mg/l	.01	0.00719	71.9	14-158	WG612335
4-Chlorophenyl-phenylether	mg/l	.01	0.00844	84.4	39-155	WG612335
4-Nitrophenol	mg/l	.01	0.00184	18.4	10-61	WG612335
Acenaphthene	mg/l	.01	0.00796	79.6	37-159	WG612335
Acenaphthylene	mg/l	.01	0.00754	75.4	34-162	WG612335
Anthracene	mg/l	.01	0.00817	81.7	48-167	WG612335
Benzidine	mg/l	.01	0.00207	20.7	10-86	WG612335
Benzo(a)anthracene	mg/l	.01	0.00834	83.4	46-167	WG612335
Benzo(a)pyrene	mg/l	.01	0.00864	86.4	39-167	WG612335
Benzo(b)fluoranthene	mg/l	.01	0.00840	84.0	39-173	WG612335
Benzo(g,h,i)perylene	mg/l	.01	0.00901	90.1	42-181	WG612335
Benzo(k)fluoranthene	mg/l	.01	0.00875	87.5	42-178	WG612335
Benzylbutyl phthalate	mg/l	.01	0.00862	86.2	10-178	WG612335
Bis(2-chlorethoxy)methane	mg/l	.01	0.00854	85.4	34-155	WG612335
Bis(2-chloroethyl)ether	mg/l	.01	0.00857	85.7	22-149	WG612335
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00797	79.7	26-149	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00900	90.0	42-191	WG612335
Chrysene	mg/l	.01	0.00892	89.2	46-170	WG612335
Di-n-butyl phthalate	mg/l	.01	0.00816	81.6	33-175	WG612335
Di-n-octyl phthalate	mg/l	.01	0.00809	80.9	40-170	WG612335
Dibenz(a,h)anthracene	mg/l	.01	0.00872	87.2	43-187	WG612335
Diethyl phthalate	mg/l	.01	0.00826	82.6	10-182	WG612335
Dimethyl phthalate	mg/l	.01	0.00852	85.2	10-165	WG612335
Fluoranthene	mg/l	.01	0.00838	83.8	46-171	WG612335
Fluorene	mg/l	.01	0.00805	80.5	39-163	WG612335
Hexachloro-1,3-butadiene	mg/l	.01	0.00662	66.2	18-136	WG612335
Hexachlorobenzene	mg/l	.01	0.00701	70.1	38-163	WG612335
Hexachlorocyclopentadiene	mg/l	.01	0.00303	30.3	10-142	WG612335
Hexachloroethane	mg/l	.01	0.00651	65.1	10-130	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00869	86.9	42-184	WG612335
Isophorone	mg/l	.01	0.00847	84.7	36-166	WG612335
n-Nitrosodi-n-propylamine	mg/l	.01	0.00865	86.5	27-157	WG612335
n-Nitrosodimethylamine	mg/l	.01	0.00457	45.7	10-96	WG612335
n-Nitrosodiphenylamine	mg/l	.01	0.00807	80.7	41-168	WG612335
Naphthalene	mg/l	.01	0.00741	74.1	26-147	WG612335
Nitrobenzene	mg/l	.01	0.00819	81.9	22-154	WG612335
Pentachlorophenol	mg/l	.01	0.00351	35.1	10-128	WG612335
Phenanthrene	mg/l	.01	0.00799	79.9	46-163	WG612335
Phenol	mg/l	.01	0.00268	26.8	10-69	WG612335
Pyrene	mg/l	.01	0.00860	86.0	45-176	WG612335
2,4,6-Tribromophenol				60.98	16-147	WG612335
2-Fluorobiphenyl				74.83	29-127	WG612335
2-Fluorophenol				33.71	10-75	WG612335
Nitrobenzene-d5				78.22	17-119	WG612335
Phenol-d5				25.50	10-63	WG612335

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
p-Terphenyl-d14				84.42	40-174	
Specific Conductance	umhos/cm	1050	1080	103.	85-115	WG612653
Antimony,Dissolved	mg/l	.05	0.0488	97.6	85-115	WG612880
Arsenic,Dissolved	mg/l	.05	0.0460	92.0	85-115	WG612880
Molybdenum,Dissolved	mg/l	.05	0.0489	97.8	85-115	WG612880
Selenium,Dissolved	mg/l	.05	0.0448	89.6	85-115	WG612880
Mercury,Dissolved	mg/l	.003	0.00284	94.7	85-115	WG612402
TPH (GC/FID) High Fraction	ppm	1.5	2.20	147.	50-150	WG612215
o-Terphenyl				137.0	50-150	WG612215
Dissolved Solids	mg/l	8800	8640	98.2	85-115	WG612486
Barium,Dissolved	mg/l	1	1.04	104.	85-115	WG612985
Boron,Dissolved	mg/l	1	0.950	95.0	85-115	WG612985
Calcium,Dissolved	mg/l	10	10.4	104.	85-115	WG612985
Chromium,Dissolved	mg/l	1	1.02	102.	85-115	WG612985
Copper,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Iron,Dissolved	mg/l	1	0.989	98.9	85-115	WG612985
Magnesium,Dissolved	mg/l	10	10.8	108.	85-115	WG612985
Manganese,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Nickel,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Potassium,Dissolved	mg/l	10	10.2	102.	85-115	WG612985
Silicon,Dissolved	mg/l	1	0.902	90.2	85-115	WG612985
Sodium,Dissolved	mg/l	10	10.5	105.	85-115	WG612985
Strontium,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Vanadium,Dissolved	mg/l	1	0.996	99.6	85-115	WG612985
Zinc,Dissolved	mg/l	1	1.06	106.	85-115	WG612985
Lithium,Dissolved	mg/l	.5	0.525	105.	85-115	WG613202

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	5.39	5.77	98.0	70-124	6.89	20	WG611964
a,a,a-Trifluorotoluene(FID)				107.1	62-128			WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0255	0.0263	102.	77-128	2.88	20	WG611956
1,1,1-Trichloroethane	mg/l	0.0247	0.0254	99.0	71-126	2.77	20	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0240	0.0246	96.0	78-130	2.36	20	WG611956
1,1,2-Trichloroethane	mg/l	0.0247	0.0248	99.0	81-121	0.660	20	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0250	0.0257	100.	53-143	2.83	20	WG611956
1,1-Dichloroethane	mg/l	0.0244	0.0242	98.0	73-123	0.690	20	WG611956
1,1-Dichloroethene	mg/l	0.0248	0.0248	99.0	54-134	0.310	20	WG611956
1,1-Dichloropropene	mg/l	0.0252	0.0247	101.	67-127	1.87	20	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0269	0.0266	108.	77-130	1.13	20	WG611956
1,2,3-Trichloropropane	mg/l	0.0245	0.0265	98.0	68-130	7.68	20	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0238	0.0234	95.0	77-126	1.55	20	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0274	0.0271	109.	76-127	0.980	20	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0254	0.0253	102.	77-129	0.500	20	WG611956

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0261	0.0270	104.	55-142	3.49	20	WG611956
1,2-Dibromoethane	mg/l	0.0254	0.0260	102.	78-124	2.42	20	WG611956
1,2-Dichlorobenzene	mg/l	0.0253	0.0245	101.	82-121	3.07	20	WG611956
1,2-Dichloroethane	mg/l	0.0250	0.0252	100.	69-128	0.740	20	WG611956
1,2-Dichloropropane	mg/l	0.0245	0.0247	98.0	77-121	0.810	20	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0256	0.0256	102.	78-127	0.0400	20	WG611956
1,3-Dichlorobenzene	mg/l	0.0254	0.0251	102.	77-127	1.21	20	WG611956
1,3-Dichloropropane	mg/l	0.0245	0.0247	98.0	78-117	0.730	20	WG611956
1,4-Dichlorobenzene	mg/l	0.0252	0.0245	101.	79-117	3.02	20	WG611956
2,2-Dichloropropane	mg/l	0.0246	0.0259	98.0	63-130	5.34	20	WG611956
2-Butanone (MEK)	mg/l	0.158	0.171	126.	58-144	7.91	20	WG611956
2-Chloroethyl vinyl ether	mg/l	0.141	0.146	113.	26-172	3.43	22	WG611956
2-Chlorotoluene	mg/l	0.0253	0.0250	101.	78-123	1.18	20	WG611956
4-Chlorotoluene	mg/l	0.0251	0.0248	100.	78-122	1.35	20	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.137	0.146	109.	58-147	6.53	20	WG611956
Acetone	mg/l	0.184	0.200	147.	49-153	8.21	21	WG611956
Acrolein	mg/l	0.0680	0.0700	54.0	10-181	2.92	30	WG611956
Acrylonitrile	mg/l	0.132	0.140	106.	53-153	5.74	20	WG611956
Benzene	mg/l	0.0242	0.0238	97.0	72-119	1.77	20	WG611956
Bromobenzene	mg/l	0.0246	0.0244	98.0	76-121	0.960	20	WG611956
Bromodichloromethane	mg/l	0.0245	0.0245	98.0	75-127	0.140	20	WG611956
Bromoform	mg/l	0.0260	0.0261	104.	61-136	0.610	20	WG611956
Bromomethane	mg/l	0.0253	0.0257	101.	42-172	1.67	20	WG611956
Carbon tetrachloride	mg/l	0.0243	0.0245	97.0	63-129	0.850	20	WG611956
Chlorobenzene	mg/l	0.0249	0.0242	99.0	78-123	2.59	20	WG611956
Chlorodibromomethane	mg/l	0.0250	0.0252	100.	73-128	0.660	20	WG611956
Chloroethane	mg/l	0.0266	0.0260	106.	52-164	2.16	20	WG611956
Chloroform	mg/l	0.0249	0.0250	99.0	76-122	0.710	20	WG611956
Chloromethane	mg/l	0.0236	0.0243	94.0	50-141	2.69	20	WG611956
cis-1,2-Dichloroethene	mg/l	0.0239	0.0242	96.0	75-121	1.04	20	WG611956
cis-1,3-Dichloropropene	mg/l	0.0252	0.0247	101.	74-124	1.92	20	WG611956
Di-isopropyl ether	mg/l	0.0253	0.0256	101.	66-129	1.00	20	WG611956
Dibromomethane	mg/l	0.0256	0.0257	102.	77-124	0.550	20	WG611956
Dichlorodifluoromethane	mg/l	0.0247	0.0243	99.0	33-173	1.63	20	WG611956
Ethylbenzene	mg/l	0.0256	0.0248	102.	77-124	3.17	20	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0249	0.0248	99.0	71-134	0.330	20	WG611956
Isopropylbenzene	mg/l	0.0275	0.0276	110.	74-126	0.340	20	WG611956
Methyl tert-butyl ether	mg/l	0.0256	0.0271	102.	67-127	5.72	20	WG611956
Methylene Chloride	mg/l	0.0237	0.0238	95.0	67-122	0.430	20	WG611956
n-Butylbenzene	mg/l	0.0259	0.0250	104.	74-130	3.58	20	WG611956
n-Propylbenzene	mg/l	0.0251	0.0248	100.	77-125	1.14	20	WG611956
Naphthalene	mg/l	0.0260	0.0267	104.	70-134	2.36	20	WG611956
p-Isopropyltoluene	mg/l	0.0262	0.0263	105.	77-132	0.600	20	WG611956
sec-Butylbenzene	mg/l	0.0253	0.0256	101.	77-130	1.37	20	WG611956
Styrene	mg/l	0.0259	0.0256	104.	69-145	1.47	20	WG611956
tert-Butylbenzene	mg/l	0.0254	0.0257	102.	76-131	1.04	20	WG611956
Tetrachloroethene	mg/l	0.0249	0.0243	100.	69-131	2.44	20	WG611956
Toluene	mg/l	0.0247	0.0242	99.0	75-114	1.99	20	WG611956
trans-1,2-Dichloroethene	mg/l	0.0241	0.0240	96.0	63-127	0.360	20	WG611956
trans-1,3-Dichloropropene	mg/l	0.0245	0.0243	98.0	69-124	0.460	20	WG611956
Trichloroethene	mg/l	0.0235	0.0235	94.0	69-131	0.170	20	WG611956
Trichlorofluoromethane	mg/l	0.0256	0.0254	102.	53-161	0.530	20	WG611956
Vinyl chloride	mg/l	0.0250	0.0255	100.	55-142	1.78	20	WG611956
Xylenes, Total	mg/l	0.0759	0.0748	101.	77-123	1.50	20	WG611956
4-Bromofluorobenzene				100.3	82-120			WG611956
Dibromofluoromethane				100.8	82-126			WG611956
Toluene-d8				103.4	92-112			WG611956

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.693	0.737	108.	70-130	6.07	25	WG612418
Ethene	mg/l	0.666	0.706	105.	70-130	5.89	25	WG612418
Methane	mg/l	0.349	0.373	103.	70-130	6.50	25	WG612418
Alkalinity	mg/l	99.0	94.0	99.0	85-115	5.18	20	WG612248
TOC (Total Organic Carbon)	mg/l	72.5	74.1	97.0	85-115	2.10	20	WG612253
pH	su	6.04	6.03	100.	98-101	0.166	20	WG612480
Bromide	mg/l	39.8	39.8	100.	90-110	0	20	WG612172
Chloride	mg/l	39.7	39.7	99.0	90-110	0	20	WG612172
Fluoride	mg/l	7.92	7.92	99.0	90-110	0	20	WG612172
Sulfate	mg/l	38.7	38.6	97.0	90-110	0.259	20	WG612172
1,2,4-Trichlorobenzene	mg/l	0.00642	0.00694	64.0	18-130	7.85	32	WG612335
2,4,6-Trichlorophenol	mg/l	0.00620	0.00702	62.0	12-147	12.4	40	WG612335
2,4-Dichlorophenol	mg/l	0.00684	0.00764	68.0	10-157	11.1	40	WG612335
2,4-Dimethylphenol	mg/l	0.00700	0.00819	70.0	19-160	15.6	40	WG612335
2,4-Dinitrophenol	mg/l	0.00471	0.00492	47.0	10-135	4.43	40	WG612335
2,4-Dinitrotoluene	mg/l	0.00723	0.00821	72.0	30-168	12.7	32	WG612335
2,6-Dinitrotoluene	mg/l	0.00743	0.00854	74.0	32-163	13.9	30	WG612335
2-Chloronaphthalene	mg/l	0.00645	0.00761	64.0	29-149	16.5	34	WG612335
2-Chlorophenol	mg/l	0.00582	0.00654	58.0	16-129	11.7	40	WG612335
2-Nitrophenol	mg/l	0.00704	0.00815	70.0	14-158	14.6	40	WG612335
3,3-Dichlorobenzidine	mg/l	0.00804	0.00909	80.0	42-150	12.3	29	WG612335
4,6-Dinitro-2-methylphenol	mg/l	0.00505	0.00606	50.0	10-164	18.1	40	WG612335
4-Bromophenyl-phenylether	mg/l	0.00751	0.00778	75.0	40-166	3.57	36	WG612335
4-Chloro-3-methylphenol	mg/l	0.00645	0.00719	64.0	14-158	10.8	40	WG612335
4-Chlorophenyl-phenylether	mg/l	0.00812	0.00844	81.0	39-155	3.85	33	WG612335
4-Nitrophenol	mg/l	0.00200	0.00184	20.0	10-61	8.46	40	WG612335
Acenaphthene	mg/l	0.00707	0.00796	71.0	37-159	11.9	30	WG612335
Acenaphthylene	mg/l	0.00710	0.00754	71.0	34-162	6.01	31	WG612335
Anthracene	mg/l	0.00752	0.00817	75.0	48-167	8.28	26	WG612335
Benzidine	mg/l	0.00262	0.00207	26.0	10-86	23.5	40	WG612335
Benzo(a)anthracene	mg/l	0.00725	0.00834	72.0	46-167	13.9	29	WG612335
Benzo(a)pyrene	mg/l	0.00719	0.00864	72.0	39-167	18.4	29	WG612335
Benzo(b)fluoranthene	mg/l	0.00772	0.00840	77.0	39-173	8.42	32	WG612335
Benzo(g,h,i)perylene	mg/l	0.00765	0.00901	76.0	42-181	16.3	30	WG612335
Benzo(k)fluoranthene	mg/l	0.00739	0.00875	74.0	42-178	16.9	33	WG612335
Benzylbutyl phthalate	mg/l	0.00762	0.00862	76.0	10-178	12.2	40	WG612335
Bis(2-chlorethoxy)methane	mg/l	0.00751	0.00854	75.0	34-155	12.9	31	WG612335
Bis(2-chloroethyl)ether	mg/l	0.00759	0.00857	76.0	22-149	12.1	38	WG612335
Bis(2-chloroisopropyl)ether	mg/l	0.00688	0.00797	69.0	26-149	14.8	34	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	0.00814	0.00900	81.0	42-191	9.99	33	WG612335
Chrysene	mg/l	0.00798	0.00892	80.0	46-170	11.1	30	WG612335
Di-n-butyl phthalate	mg/l	0.00790	0.00816	79.0	33-175	3.19	39	WG612335
Di-n-octyl phthalate	mg/l	0.00744	0.00809	74.0	40-170	8.44	28	WG612335
Dibenz(a,h)anthracene	mg/l	0.00778	0.00872	78.0	43-187	11.3	31	WG612335
Diethyl phthalate	mg/l	0.00767	0.00826	77.0	10-182	7.33	35	WG612335
Dimethyl phthalate	mg/l	0.00800	0.00852	80.0	10-165	6.37	37	WG612335
Fluoranthene	mg/l	0.00763	0.00838	76.0	46-171	9.32	37	WG612335
Fluorene	mg/l	0.00736	0.00805	74.0	39-163	9.02	36	WG612335
Hexachloro-1,3-butadiene	mg/l	0.00606	0.00662	60.0	18-136	8.84	30	WG612335

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hexachlorobenzene	mg/l	0.00702	0.00701	70.0	38-163	0.0901	35	WG612335
Hexachlorocyclopentadiene	mg/l	0.00248	0.00303	25.0	10-142	20.1	40	WG612335
Hexachloroethane	mg/l	0.00554	0.00651	55.0	10-130	16.2	39	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	0.00774	0.00869	77.0	42-184	11.6	32	WG612335
Isophorone	mg/l	0.00795	0.00847	80.0	36-166	6.30	35	WG612335
n-Nitrosodi-n-propylamine	mg/l	0.00758	0.00865	76.0	27-157	13.3	31	WG612335
n-Nitrosodimethylamine	mg/l	0.00428	0.00457	43.0	10-96	6.51	36	WG612335
n-Nitrosodiphenylamine	mg/l	0.00712	0.00807	71.0	41-168	12.6	37	WG612335
Naphthalene	mg/l	0.00652	0.00741	65.0	26-147	12.9	31	WG612335
Nitrobenzene	mg/l	0.00734	0.00819	73.0	22-154	11.0	37	WG612335
Pentachlorophenol	mg/l	0.00350	0.00351	35.0	10-128	0.270	40	WG612335
Phenanthrene	mg/l	0.00737	0.00799	74.0	46-163	8.00	29	WG612335
Phenol	mg/l	0.00283	0.00268	28.0	10-69	5.60	40	WG612335
Pyrene	mg/l	0.00768	0.00860	77.0	45-176	11.3	28	WG612335
2,4,6-Tribromophenol				59.03	16-147			WG612335
2-Fluorobiphenyl				68.14	29-127			WG612335
2-Fluorophenol				32.43	10-75			WG612335
Nitrobenzene-d5				73.11	17-119			WG612335
Phenol-d5				25.85	10-63			WG612335
p-Terphenyl-d14				72.88	40-174			WG612335
Specific Conductance	umhos/	1080	1080	103.	85-115	0	20	WG612653
TPH (GC/FID) High Fraction	ppm	2.10	2.20	140.	50-150	4.65	20	WG612215
o-Terphenyl				119.9	50-150			WG612215
Dissolved Solids	mg/l	8690	8640	99.0	85-115	0.554	5	WG612486

Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref Res						
TPH (GC/FID) Low Fraction	mg/l	5.38	0		5.5	97.7	55-109	L594224-01	WG611964
a,a,a-Trifluorotoluene(FID)						105.1	62-128		WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0257	0	.025	103.		71-130	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0251	0	.025	100.		58-137	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0235	0	.025	94.0		64-149	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0245	0	.025	98.2		73-128	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0244	0	.025	97.5		36-159	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0241	0	.025	96.4		58-133	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0246	0	.025	98.3		32-152	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0237	0	.025	94.6		50-140	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0255	0	.025	102.		68-135	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0250	0	.025	99.9		74-137	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0237	0	.025	95.0		67-133	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0250	0	.025	99.8		67-133	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0242	0	.025	96.7		62-141	L594224-01	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	0.0255	0	.025	102.		55-148	L594224-01	WG611956
1,2-Dibromoethane	mg/l	0.0255	0	.025	102.		71-129	L594224-01	WG611956
1,2-Dichlorobenzene	mg/l	0.0242	0	.025	96.7		75-125	L594224-01	WG611956
1,2-Dichloroethane	mg/l	0.0247	0	.025	98.9		59-135	L594224-01	WG611956
1,2-Dichloropropane	mg/l	0.0244	0	.025	97.7		68-126	L594224-01	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0249	0	.025	99.5		67-136	L594224-01	WG611956
1,3-Dichlorobenzene	mg/l	0.0239	0	.025	95.5		69-131	L594224-01	WG611956
1,3-Dichloropropane	mg/l	0.0242	0	.025	96.7		70-122	L594224-01	WG611956

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,4-Dichlorobenzene	mg/l	0.0237	0	.025	94.8	70-123	L594224-01	WG611956
2,2-Dichloropropane	mg/l	0.0251	0	.025	100.	51-141	L594224-01	WG611956
2-Butanone (MEK)	mg/l	0.132	0	.125	106.	51-149	L594224-01	WG611956
2-Chloroethyl vinyl ether	mg/l	0.000324	0	.125	0.259*	10-161	L594224-01	WG611956
2-Chlorotoluene	mg/l	0.0243	0	.025	97.1	65-133	L594224-01	WG611956
4-Chlorotoluene	mg/l	0.0238	0	.025	95.2	67-129	L594224-01	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.135	0	.125	108.	53-154	L594224-01	WG611956
Acetone	mg/l	0.116	0	.125	92.8	34-146	L594224-01	WG611956
Acrolein	mg/l	0.132	0	.125	105.	10-189	L594224-01	WG611956
Acrylonitrile	mg/l	0.135	0	.125	108.	49-162	L594224-01	WG611956
Benzene	mg/l	0.0240	0	.025	95.9	51-134	L594224-01	WG611956
Bromobenzene	mg/l	0.0240	0	.025	96.1	64-130	L594224-01	WG611956
Bromodichloromethane	mg/l	0.0246	0	.025	98.4	67-132	L594224-01	WG611956
Bromoform	mg/l	0.0254	0	.025	102.	59-137	L594224-01	WG611956
Bromomethane	mg/l	0.0260	0	.025	104.	23-177	L594224-01	WG611956
Carbon tetrachloride	mg/l	0.0243	0	.025	97.2	49-140	L594224-01	WG611956
Chlorobenzene	mg/l	0.0241	0	.025	96.5	69-126	L594224-01	WG611956
Chlorodibromomethane	mg/l	0.0248	0	.025	99.0	68-130	L594224-01	WG611956
Chloroethane	mg/l	0.0261	0	.025	104.	32-177	L594224-01	WG611956
Chloroform	mg/l	0.0249	0	.025	99.5	64-130	L594224-01	WG611956
Chloromethane	mg/l	0.0240	0	.025	95.9	27-155	L594224-01	WG611956
cis-1,2-Dichloroethene	mg/l	0.0240	0	.025	96.0	54-137	L594224-01	WG611956
cis-1,3-Dichloropropene	mg/l	0.0238	0	.025	95.4	63-127	L594224-01	WG611956
Di-isopropyl ether	mg/l	0.0262	0	.025	105.	58-133	L594224-01	WG611956
Dibromomethane	mg/l	0.0254	0	.025	102.	68-131	L594224-01	WG611956
Dichlorodifluoromethane	mg/l	0.0245	0	.025	98.2	16-188	L594224-01	WG611956
Ethylbenzene	mg/l	0.0246	0	.025	98.4	64-135	L594224-01	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0236	0	.025	94.2	64-140	L594224-01	WG611956
Isopropylbenzene	mg/l	0.0272	0	.025	109.	62-134	L594224-01	WG611956
Methyl tert-butyl ether	mg/l	0.0270	0	.025	108.	55-136	L594224-01	WG611956
Methylene Chloride	mg/l	0.0233	0	.025	93.3	52-130	L594224-01	WG611956
n-Butylbenzene	mg/l	0.0233	0	.025	93.0	62-142	L594224-01	WG611956
n-Propylbenzene	mg/l	0.0237	0	.025	94.8	62-137	L594224-01	WG611956
Naphthalene	mg/l	0.0250	0	.025	99.9	65-140	L594224-01	WG611956
p-Isopropyltoluene	mg/l	0.0252	0	.025	101.	64-142	L594224-01	WG611956
sec-Butylbenzene	mg/l	0.0249	0	.025	99.7	67-139	L594224-01	WG611956
Styrene	mg/l	0.0238	0	.025	95.1	58-152	L594224-01	WG611956
tert-Butylbenzene	mg/l	0.0254	0	.025	102.	66-139	L594224-01	WG611956
Tetrachloroethene	mg/l	0.0229	0	.025	91.6	56-139	L594224-01	WG611956
Toluene	mg/l	0.0243	0	.025	97.4	61-126	L594224-01	WG611956
trans-1,2-Dichloroethene	mg/l	0.0240	0	.025	95.8	45-137	L594224-01	WG611956
trans-1,3-Dichloropropene	mg/l	0.0241	0	.025	96.5	59-130	L594224-01	WG611956
Trichloroethene	mg/l	0.0226	0	.025	90.4	40-155	L594224-01	WG611956
Trichlorofluoromethane	mg/l	0.0245	0	.025	98.1	35-177	L594224-01	WG611956
Vinyl chloride	mg/l	0.0250	0	.025	100.	32-159	L594224-01	WG611956
Xylenes, Total	mg/l	0.0727	0	.075	97.0	64-133	L594224-01	WG611956
4-Bromofluorobenzene					101.2	82-120		WG611956
Dibromofluoromethane					101.7	82-126		WG611956
Toluene-d8					104.3	92-112		WG611956
Mercury	mg/l	0.00298	0	.003	99.3	70-130	L594224-01	WG611975
Ethane	mg/l	0.682	0	.645	106.	70-130	L594625-02	WG612418
Ethene	mg/l	0.655	0	.635	103.	70-130	L594625-02	WG612418
Methane	mg/l	0.339	0	.339	100.	70-130	L594625-02	WG612418

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Alkalinity	mg/l	500.	450.	100	50.0*	80-120	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1880	810.	50	107.	80-120	L593857-04	WG612253
Chloride	mg/l	64.1	15.0	50	98.2	80-120	L594395-01	WG612172
Fluoride	mg/l	4.97	0.110	5	97.2	80-120	L594395-01	WG612172
Sulfate	mg/l	66.1	16.0	50	100.	80-120	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0544	0	.05	109.	75-125	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0538	0.00150	.05	105.	75-125	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0516	0.00370	.05	95.8	75-125	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0628	0.00720	.05	111.	75-125	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	0.0630	1	103.	75-125	L594520-01	WG612985
Boron, Dissolved	mg/l	1.45	0.448	1	100.	75-125	L594520-01	WG612985
Calcium, Dissolved	mg/l	130.	120.	10	100.	75-125	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.02	0	1	102.	75-125	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	0	1	103.	75-125	L594520-01	WG612985
Iron, Dissolved	mg/l	4.87	3.89	1	98.0	75-125	L594520-01	WG612985
Magnesium, Dissolved	mg/l	58.7	48.0	10	107.	75-125	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	0.401	1	103.	75-125	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	0.00390	1	101.	75-125	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.1	8.30	10	98.0	75-125	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.7	12.7	1	100.	75-125	L594520-01	WG612985
Sodium, Dissolved	mg/l	59.0	49.8	10	92.0	75-125	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.20	0.188	1	101.	75-125	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.01	0	1	101.	75-125	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.11	0.0373	1	107.	75-125	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.567	0.0449	.5	104.	75-125	L595020-01	WG613202

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.75	5.38	105.	55-109	6.78	20	L594224-01	WG611964
a,a,a-Trifluorotoluene (FID)				106.4	62-128				WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0233	0.0257	93.1	71-130	9.94	20	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0247	0.0251	98.8	58-137	1.82	20	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0226	0.0235	90.3	64-149	4.00	20	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0222	0.0245	88.8	73-128	10.1	20	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0249	0.0244	99.6	36-159	2.22	21	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0230	0.0241	92.1	58-133	4.51	20	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0243	0.0246	97.2	32-152	1.21	20	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0242	0.0237	96.7	50-140	2.20	20	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0232	0.0255	92.7	68-135	9.40	20	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0236	0.0250	94.2	74-137	5.85	20	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0205	0.0237	82.0	67-133	14.7	20	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0230	0.0250	91.8	67-133	8.29	20	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0223	0.0242	89.0	62-141	8.30	20	L594224-01	WG611956

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dibromo-3-Chloropropane	mg/l	0.0247	0.0255	98.9	55-148	3.26	22	L594224-01	WG611956	
1,2-Dibromoethane	mg/l	0.0231	0.0255	92.5	71-129	9.58	20	L594224-01	WG611956	
1,2-Dichlorobenzene	mg/l	0.0216	0.0242	86.4	75-125	11.3	20	L594224-01	WG611956	
1,2-Dichloroethane	mg/l	0.0227	0.0247	90.7	59-135	8.68	20	L594224-01	WG611956	
1,2-Dichloropropane	mg/l	0.0222	0.0244	88.8	68-126	9.49	20	L594224-01	WG611956	
1,3,5-Trimethylbenzene	mg/l	0.0231	0.0249	92.2	67-136	7.57	20	L594224-01	WG611956	
1,3-Dichlorobenzene	mg/l	0.0222	0.0239	88.6	69-131	7.47	20	L594224-01	WG611956	
1,3-Dichloropropane	mg/l	0.0218	0.0242	87.3	70-122	10.2	20	L594224-01	WG611956	
1,4-Dichlorobenzene	mg/l	0.0212	0.0237	84.8	70-123	11.2	20	L594224-01	WG611956	
2,2-Dichloropropane	mg/l	0.0240	0.0251	96.0	51-141	4.34	20	L594224-01	WG611956	
2-Butanone (MEK)	mg/l	0.129	0.132	103.	51-149	2.46	22	L594224-01	WG611956	
2-Chloroethyl vinyl ether	mg/l	0.000305	0.000324	0.244*	10-161	6.14	40	L594224-01	WG611956	
2-Chlorotoluene	mg/l	0.0225	0.0243	89.8	65-133	7.84	20	L594224-01	WG611956	
4-Chlorotoluene	mg/l	0.0223	0.0238	89.1	67-129	6.64	20	L594224-01	WG611956	
4-Methyl-2-pentanone (MIBK)	mg/l	0.132	0.135	106.	53-154	2.10	21	L594224-01	WG611956	
Acetone	mg/l	0.113	0.116	90.1	34-146	3.01	22	L594224-01	WG611956	
Acrolein	mg/l	0.127	0.132	102.	10-189	3.76	30	L594224-01	WG611956	
Acrylonitrile	mg/l	0.132	0.135	106.	49-162	1.67	20	L594224-01	WG611956	
Benzene	mg/l	0.0228	0.0240	91.2	51-134	5.04	20	L594224-01	WG611956	
Bromobenzene	mg/l	0.0221	0.0240	88.6	64-130	8.19	20	L594224-01	WG611956	
Bromodichloromethane	mg/l	0.0224	0.0246	89.5	67-132	9.47	20	L594224-01	WG611956	
Bromoform	mg/l	0.0236	0.0254	94.5	59-137	7.35	20	L594224-01	WG611956	
Bromomethane	mg/l	0.0240	0.0260	96.1	23-177	7.94	21	L594224-01	WG611956	
Carbon tetrachloride	mg/l	0.0243	0.0243	97.4	49-140	0.210	20	L594224-01	WG611956	
Chlorobenzene	mg/l	0.0225	0.0241	89.9	69-126	7.08	20	L594224-01	WG611956	
Chlorodibromomethane	mg/l	0.0223	0.0248	89.4	68-130	10.3	20	L594224-01	WG611956	
Chloroethane	mg/l	0.0257	0.0261	103.	32-177	1.63	21	L594224-01	WG611956	
Chloroform	mg/l	0.0234	0.0249	93.7	64-130	5.98	20	L594224-01	WG611956	
Chloromethane	mg/l	0.0235	0.0240	94.0	27-155	2.03	20	L594224-01	WG611956	
cis-1,2-Dichloroethene	mg/l	0.0226	0.0240	90.4	54-137	6.01	20	L594224-01	WG611956	
cis-1,3-Dichloropropene	mg/l	0.0214	0.0238	85.7	63-127	10.7	20	L594224-01	WG611956	
Di-isopropyl ether	mg/l	0.0231	0.0262	92.2	58-133	12.8	20	L594224-01	WG611956	
Dibromomethane	mg/l	0.0232	0.0254	92.9	68-131	8.91	20	L594224-01	WG611956	
Dichlorodifluoromethane	mg/l	0.0249	0.0245	99.6	16-188	1.41	22	L594224-01	WG611956	
Ethylbenzene	mg/l	0.0230	0.0246	92.1	64-135	6.66	20	L594224-01	WG611956	
Hexachloro-1,3-butadiene	mg/l	0.0229	0.0236	91.4	64-140	3.01	20	L594224-01	WG611956	
Isopropylbenzene	mg/l	0.0256	0.0272	102.	62-134	6.18	20	L594224-01	WG611956	
Methyl tert-butyl ether	mg/l	0.0243	0.0270	97.2	55-136	10.4	20	L594224-01	WG611956	
Methylene Chloride	mg/l	0.0216	0.0233	86.2	52-130	7.93	20	L594224-01	WG611956	
n-Butylbenzene	mg/l	0.0225	0.0233	90.0	62-142	3.31	20	L594224-01	WG611956	
n-Propylbenzene	mg/l	0.0229	0.0237	91.7	62-137	3.38	20	L594224-01	WG611956	
Naphthalene	mg/l	0.0235	0.0250	94.2	65-140	5.87	20	L594224-01	WG611956	
p-Isopropyltoluene	mg/l	0.0241	0.0252	96.4	64-142	4.36	20	L594224-01	WG611956	
sec-Butylbenzene	mg/l	0.0236	0.0249	94.3	67-139	5.59	20	L594224-01	WG611956	
Styrene	mg/l	0.0215	0.0238	86.0	58-152	10.1	20	L594224-01	WG611956	
tert-Butylbenzene	mg/l	0.0238	0.0254	95.3	66-139	6.43	20	L594224-01	WG611956	
Tetrachloroethene	mg/l	0.0226	0.0229	90.5	56-139	1.21	20	L594224-01	WG611956	
Toluene	mg/l	0.0228	0.0243	91.2	61-126	6.56	20	L594224-01	WG611956	
trans-1,2-Dichloroethene	mg/l	0.0232	0.0240	92.7	45-137	3.29	20	L594224-01	WG611956	
trans-1,3-Dichloropropene	mg/l	0.0215	0.0241	85.8	59-130	11.7	20	L594224-01	WG611956	
Trichloroethene	mg/l	0.0221	0.0226	88.4	40-155	2.30	20	L594224-01	WG611956	
Trichlorofluoromethane	mg/l	0.0259	0.0245	104.	35-177	5.40	23	L594224-01	WG611956	
Vinyl chloride	mg/l	0.0253	0.0250	101.	32-159	1.11	21	L594224-01	WG611956	
Xylenes, Total	mg/l	0.0681	0.0727	90.8	64-133	6.57	20	L594224-01	WG611956	
4-Bromofluorobenzene				101.7	82-120				WG611956	
Dibromofluoromethane				103.2	82-126				WG611956	
Toluene-d8				103.9	92-112				WG611956	

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/l	0.00299	0.00298	99.7	70-130	0.335	20	L594224-01	WG611975
Ethane	mg/l	0.691	0.682	107.	70-130	1.33	25	L594625-02	WG612418
Ethene	mg/l	0.662	0.655	104.	70-130	1.10	25	L594625-02	WG612418
Methane	mg/l	0.342	0.339	101.	70-130	0.770	25	L594625-02	WG612418
Alkalinity	mg/l	490.	500.	40.0*	80-120	2.02	20	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1830	1880	102.	80-120	2.37	20	L593857-04	WG612253
Chloride	mg/l	64.3	64.1	98.6	80-120	0.312	20	L594395-01	WG612172
Fluoride	mg/l	4.99	4.97	97.6	80-120	0.402	20	L594395-01	WG612172
Sulfate	mg/l	66.1	66.1	100.	80-120	0	20	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0538	0.0544	108.	75-125	1.11	20	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0524	0.0538	102.	75-125	2.64	20	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0514	0.0516	95.4	75-125	0.388	20	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0601	0.0628	106.	75-125	4.39	20	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00281	0.00284	93.7	70-130	1.06	30	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	1.09	103.	75-125	0	20	L594520-01	WG612985
Boron, Dissolved	mg/l	1.46	1.45	101.	75-125	0.687	20	L594520-01	WG612985
Calcium, Dissolved	mg/l	135.	130.	150.*	75-125	3.77	20	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L594520-01	WG612985
Iron, Dissolved	mg/l	4.92	4.87	103.	75-125	1.02	20	L594520-01	WG612985
Magnesium, Dissolved	mg/l	59.1	58.7	111.	75-125	0.679	20	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	1.43	103.	75-125	0	20	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.5	18.1	102.	75-125	2.19	20	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.8	13.7	110.	75-125	0.727	20	L594520-01	WG612985
Sodium, Dissolved	mg/l	60.2	59.0	104.	75-125	2.01	20	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.22	1.20	103.	75-125	1.65	20	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.00	1.01	100.	75-125	0.995	20	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.10	1.11	106.	75-125	0.905	20	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.562	0.567	103.	75-125	0.886	20	L595020-01	WG613202

Batch number /Run number / Sample number cross reference

WG611964: R2339893: L594224-01  
WG611956: R2341093: L594224-01  
WG611975: R2341373: L594224-01  
WG612418: R2344075: L594224-01  
WG612248: R2344113: L594224-01  
WG612245: R2344333: L594224-01  
WG612249: R2344353: L594224-01  
WG612253: R2346533: L594224-01  
WG612480: R2346693: L594224-01

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

WG612172: R2347513: L594224-01  
WG612335: R2348173: L594224-01  
WG612653: R2348277: L594224-01  
WG612880: R2348735: L594224-01  
WG612402: R2348773: L594224-01  
WG612215: R2348778: L594224-01  
WG612486: R2350433: L594224-01  
WG612985: R2350614: L594224-01  
WG613202: R2353153: L594224-01

\* \* 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.'



Encana  
Aaron Stacy  
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Parachute, CO 81635

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Est. 1970

September 19, 2012

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.



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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593600

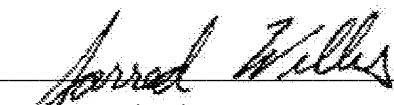
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	2.2	1.0	mg/l	9056	09/07/12	1
Chloride	680	10.	mg/l	9056	09/07/12	10
Fluoride	2.8	0.10	mg/l	9056	09/10/12	1
Sulfate	530	50.	mg/l	9056	09/07/12	10
Alkalinity	290	20.	mg/l	2320B	09/11/12	1
Alkalinity,Bicarbonate	290	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	3.1	0.10	mg/l	RSK175	09/07/12	10
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.0		su	9040C	09/11/12	1
Specific Conductance	4000		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	2200	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.017	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.044	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.0050	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.069	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	67.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.096	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	3.6	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	0.11	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.3	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	790	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	2.2	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.17	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.1		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	94.9		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	107.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	54.9		% Rec.	8270 C	09/10/12	1
Phenol-d5	35.9		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	67.1		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	77.9		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	73.9		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	94.7		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:39  
L593600-01 (PH) - 8.0@16.1c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593600-01	WG611870	SAMP	pH	R2339874	T8
	WG612100	SAMP	Selenium,Dissolved	R2347893	J3
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:39:56

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593600-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
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Quality Assurance Report  
Level II

L593600

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



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Level II

L593600

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12

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



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Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cobalt, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium, Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon, Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc, Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic, Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum, Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858
Mercury, Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium, Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron, Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075
Calcium, Dissolved	mg/l	38.0	38.0		0	20	L593221-01	WG612075

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Level II

L593600

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benztidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury, Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310

\* Performance of this Analyte is outside of established criteria.

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**YOUR LAB OF CHOICE**

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310
Trichloroethene	mg/l	0.0276	0.0282	110.	69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0	53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0	55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.	77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9	82-120			WG611310
Dibromofluoromethane				90.87	82-126			WG611310
Toluene-d8				100.9	92-112			WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0		34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0		48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0		10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0		46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0		39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0		39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0		42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0		42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0		10-178	21.9	40	WG611581

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310

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Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421

TPH (GC/FID) Low Fraction mg/l 5.92 0 5.5 108. 55-109 L593663-01 WG611405

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Encana  
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Quality Assurance Report  
Level II

L593600

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
a,a,a-Trifluorotoluene(FID)					105.2	62-128		
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310

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Parachute, CO 81635

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Level II

L593600

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421

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Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593600-01  
WG611471: R2334493: L593600-01  
WG611421: R2334814: L593600-01  
WG611526: R2336033: L593600-01  
WG611405: R2337235: L593600-01  
WG611718: R2338293: L593600-01  
WG611577: R2339033: L593600-01  
WG611624: R2339313: L593600-01  
WG611507: R2339873: L593600-01  
WG611870: R2339874: L593600-01  
WG611833: R2339913: L593600-01  
WG611835: R2339973: L593600-01  
WG611838: R2339993: L593600-01

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

WG611581: R2340113: L593600-01  
WG611858: R2340713: L593600-01  
WG611391: R2340917: L593600-01  
WG612075: R2344074: L593600-01  
WG612100: R2347893: L593600-01

\* \* 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.'



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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.



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Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593599

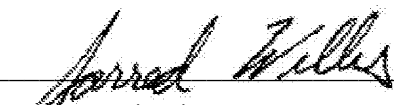
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	100	50.	mg/l	9056	09/07/12	50
Fluoride	1.7	0.10	mg/l	9056	09/10/12	1
Sulfate	1400	250	mg/l	9056	09/07/12	50
Alkalinity	180	20.	mg/l	2320B	09/11/12	1
Alkalinity,Bicarbonate	180	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.2		su	9040C	09/11/12	1
Specific Conductance	3600		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	2400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0057	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.024	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.026	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Potassium,Dissolved	1.9	0.50	mg/l	6010B	09/11/12	1
Barium,Dissolved	0.015	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	42.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	0.031	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.050	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	2.8	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	2.9	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	760	0.50	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Strontium,Dissolved	1.7	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.7		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	99.2		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.7		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	110.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c



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Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	51.6		% Rec.	8270 C	09/10/12	1
Phenol-d5	34.5		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	61.9		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	61.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	72.3		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	81.7		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593599-01 (PH) - 8.2@15.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593599-01	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:40:08

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593599-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39





Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
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Quality Assurance Report  
Level II

L593599

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Potassium,Dissolved	< .5	mg/l			WG611671	09/11/12 11:35
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12

\* Performance of this Analyte is outside of established criteria.  
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Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Potassium,Dissolved	mg/l	2.00	1.90		5.63	20	L593599-01	WG611671
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858

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YOUR LAB OF CHOICE

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Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Mercury,Dissolved	mg/l	0	0	0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342	3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533	NA	0	L593221-01	WG612075
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310

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Parachute, CO 81635

Quality Assurance Report  
Level II

L593599

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577
Potassium,Dissolved	mg/l	11.3	11.7	104.	85-115	WG611671
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581

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Level II

L593599

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury,Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium,Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron,Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium,Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium,Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt,Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper,Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium,Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium,Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese,Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel,Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium,Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon,Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium,Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium,Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium,Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc,Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony,Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310

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YOUR LAB OF CHOICE

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310

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Quality Assurance Report  
Level II

L593599

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acenaphthylene	mg/l	0.00554	0.00670	55.0	34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0	48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0	10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0	46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0	39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0	39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0	42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0	42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0	10-178	21.9	40	WG611581
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310

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Level II

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Toluene-d8					101.0	92-112		
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421
TPH (GC/FID) Low Fraction	mg/l	5.92	0	5.5	108.	55-109	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)					105.2	62-128		WG611405
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Potassium,Dissolved	mg/l	13.6	1.90	11.3	104.	75-125	L593599-01	WG611671
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310	
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310	
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310	
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310	
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310	
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310	
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310	
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310	
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310	
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310	
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310	
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310	
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0224	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0223	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Potassium,Dissolved	mg/l	13.8	13.6	105.	75-125	1.46	20	L593599-01	WG611671
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

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Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593599-01  
WG611471: R2334493: L593599-01  
WG611421: R2334814: L593599-01  
WG611526: R2336033: L593599-01  
WG611405: R2337235: L593599-01  
WG611718: R2338293: L593599-01  
WG611577: R2339033: L593599-01  
WG611671: R2339193: L593599-01  
WG611624: R2339313: L593599-01  
WG611507: R2339873: L593599-01  
WG611870: R2339874: L593599-01  
WG611833: R2339913: L593599-01  
WG611835: R2339973: L593599-01  
WG611838: R2339993: L593599-01  
WG611581: R2340113: L593599-01  
WG611858: R2340713: L593599-01  
WG611391: R2340917: L593599-01  
WG612075: R2344074: L593599-01  
WG612100: R2347893: L593599-01

\* \* Calculations are performed prior to rounding of reported values.

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Parachute, CO 81635

Quality Assurance Report  
Level II

L593599

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

September 16, 2012

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.



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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593598

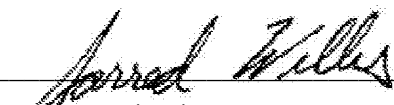
Samples Received: 09/06/12

Client Project: F12 Poly Release

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	19.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.6	0.10	mg/l	9056	09/10/12	1
Sulfate	85.	5.0	mg/l	9056	09/07/12	1
Alkalinity	610	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	590	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	20.	20.	mg/l	2320B	09/11/12	1
Methane	0.017	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.5		su	9040C	09/11/12	1
Specific Conductance	1400		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.8	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	800	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0032	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.0061	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.0060	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.11	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.31	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	44.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.064	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	45.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.5	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	7.5	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	220	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	1.5	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.5		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCH11IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCH11IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.1		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	109.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	57.9		% Rec.	8270 C	09/10/12	1
Phenol-d5	39.9		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	70.3		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	79.0		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	80.6		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	83.6		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:39  
L593598-01 (PH) - 8.5@15.5c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593598-01	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:40:03

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593598-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

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Encana  
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Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50

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Encana  
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Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12

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Level II

L593598

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(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cobalt, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium, Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon, Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc, Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic, Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum, Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858
Mercury, Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium, Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron, Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075
Calcium, Dissolved	mg/l	38.0	38.0		0	20	L593221-01	WG612075

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310

\* Performance of this Analyte is outside of established criteria.

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577

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Level II

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzydine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581

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Quality Assurance Report  
Level II

L593598

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury, Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310

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**YOUR LAB OF CHOICE**

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310
Trichloroethene	mg/l	0.0276	0.0282	110.	69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0	53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0	55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.	77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9	82-120			WG611310
Dibromofluoromethane				90.87	82-126			WG611310
Toluene-d8				100.9	92-112			WG611310

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0		34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0		48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0		10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0		46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0		39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0		39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0		42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0		42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0		10-178	21.9	40	WG611581

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YOUR LAB OF CHOICE

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Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310

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Level II

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(615) 758-5858  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421

TPH (GC/FID) Low Fraction mg/l 5.92 0 5.5 108. 55-109 L593663-01 WG611405

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
a,a,a-Trifluorotoluene(FID)					105.2	62-128		
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593598-01  
WG611471: R2334493: L593598-01  
WG611421: R2334814: L593598-01  
WG611526: R2336033: L593598-01  
WG611405: R2337235: L593598-01  
WG611718: R2338293: L593598-01  
WG611577: R2339033: L593598-01  
WG611624: R2339313: L593598-01  
WG611507: R2339873: L593598-01  
WG611870: R2339874: L593598-01  
WG611833: R2339913: L593598-01  
WG611835: R2339973: L593598-01  
WG611838: R2339993: L593598-01

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WG611581: R2340113: L593598-01  
WG611858: R2340713: L593598-01  
WG611391: R2340917: L593598-01  
WG612075: R2344074: L593598-01  
WG612100: R2347893: L593598-01

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

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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.



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## Report Summary

Sunday September 16, 2012

Report Number: L593548

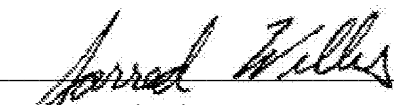
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	34.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.2	0.10	mg/l	9056	09/08/12	1
Sulfate	510	50.	mg/l	9056	09/07/12	10
Alkalinity	580	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	580	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.7		su	9040C	09/11/12	1
Specific Conductance	2300		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	5.5	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	1400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0027	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.012	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.035	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.014	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.38	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	52.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.053	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	23.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	3.2	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.9	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	440	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	2.4	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.055	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/08/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.4		% Rec.	8015D/GRO	09/08/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.3		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	0.19	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	62.7		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-01 (PH) - 7.7@16.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:10

ESC Sample # : L593548-01

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	53.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	39.1		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	62.9		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	78.2		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	85.1		% Rec.	8270 C	09/10/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-01 (PH) - 7.7@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	190	20.	mg/l	9056	09/07/12	20
Sulfate	1000	100	mg/l	9056	09/07/12	20
Fluoride	1.2	0.10	mg/l	300.0	09/10/12	1
Alkalinity	510	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	510	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	7.9		su	9040C	09/11/12	1
Specific Conductance	2700		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/07/12	1
Dissolved Solids	2400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.018	0.0010	mg/l	200.8	09/10/12	1
Molybdenum,Dissolved	0.0062	0.0020	mg/l	200.8	09/10/12	1
Selenium,Dissolved	0.44	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.022	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.47	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	73.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.083	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	31.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	4.4	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.4	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	720	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	3.5	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.6		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	89.8		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	101.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593548-02 (PH) - 7.9@15.1c



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

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : BELL2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 11:30

ESC Sample # : L593548-02

Site ID : BELL1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	54.1		% Rec.	8270 C	09/10/12	1
Phenol-d5	37.4		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	67.7		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	78.4		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	82.8		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	94.8		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593548-02 (PH) - 7.9@15.1c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593548-01	WG611870	SAMP	pH	R2339874	T8
	WG611310	SAMP	Bromoform	R2333913	J5
	WG611310	SAMP	2-Chloroethyl vinyl ether	R2333913	J6J3
	WG611581	SAMP	Benzidine	R2340113	J3
L593548-02	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/16/12 at 13:40:13

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593548-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39

Sample: L593548-02 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG611428	09/07/12 11:04
Ethene	< .013	mg/l			WG611428	09/07/12 11:04
Methane	< .01	mg/l			WG611428	09/07/12 11:04
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Bromide	< 1	mg/l			WG611270	09/07/12 07:13
Chloride	< 1	mg/l			WG611270	09/07/12 07:13
Sulfate	< 5	mg/l			WG611270	09/07/12 07:13
TOC (Total Organic Carbon)	< 1	mg/l			WG611294	09/07/12 15:38
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
Fluoride	< .1	mg/l			WG611479	09/08/12 07:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611509	09/11/12 17:23
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50

\* Performance of this Analyte is outside of established criteria.

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



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		Units	% Rec			
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	25.0	25.0		0.401	20	L593591-03	WG611270
Chloride	mg/l	32.0	33.0		2.45	20	L593591-05	WG611270
TOC (Total Organic Carbon)	mg/l	1.80	1.80		0.554	20	L593484-01	WG611294
TOC (Total Organic Carbon)	mg/l	1.50	1.50		1.98	20	L593580-14	WG611294
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Dissolved Solids	mg/l	1100	1070		0.468	5	L593597-01	WG611509
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
Mercury,Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Ethane	mg/l	.645	0.712	110.	70-130	WG611428
Ethene	mg/l	.635	0.686	108.	70-130	WG611428
Methane	mg/l	.339	0.363	107.	70-130	WG611428
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Bromide	mg/l	40	40.4	101.	90-110	WG611270
Chloride	mg/l	40	39.3	98.3	90-110	WG611270
Sulfate	mg/l	40	39.5	98.8	90-110	WG611270
TOC (Total Organic Carbon)	mg/l	75	72.2	96.2	85-115	WG611294
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	8.08	101.	90-110	WG611479
TPH (GC/FID) High Fraction o-Terphenyl	ppm	1.5	1.50	100. 100.5	50-150 50-150	WG611577 WG611577
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
pH	su	6.03	6.01	99.7	98-101	WG611870
Dissolved Solids	mg/l	8800	8650	98.3	85-115	WG611509
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch
		Known	Val	Result			
Hexachlorobenzene	mg/l	.01		0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01		0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01		0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01		0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01		0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01		0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01		0.00328	32.8	10-96	WG611581
n-Nitrosodiphenylamine	mg/l	.01		0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01		0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01		0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01		0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01		0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01		0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01		0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol					77.84	16-147	WG611581
2-Fluorobiphenyl					70.36	29-127	WG611581
2-Fluorophenol					54.46	10-75	WG611581
Nitrobenzene-d5					66.24	17-119	WG611581
Phenol-d5					35.22	10-63	WG611581
p-Terphenyl-d14					77.90	40-174	WG611581
Mercury, Dissolved	mg/l	.003		0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1		0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1		1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1		1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5		0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10		10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1		1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1		0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10		10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1		0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10		10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1		1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1		1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1		1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05		0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05		0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.716	0.712	111.	70-130	0.500	25	WG611428
Ethene	mg/l	0.690	0.686	109.	70-130	0.570	25	WG611428
Methane	mg/l	0.372	0.363	110.	70-130	2.35	25	WG611428
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310

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YOUR LAB OF CHOICE

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310
Bromide	mg/l	40.0	40.4	100.		90-110	0.995	20	WG611270
Chloride	mg/l	39.1	39.3	98.0		90-110	0.510	20	WG611270
Sulfate	mg/l	39.2	39.5	98.0		90-110	0.762	20	WG611270
TOC (Total Organic Carbon)	mg/l	74.5	72.2	99.0		85-115	3.23	20	WG611294
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
Fluoride	mg/l	8.06	8.08	101.		90-110	0.248	20	WG611479
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Dissolved Solids	mg/l	8660	8650	98.0		85-115	0.139	5	WG611509
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593548

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

September 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acenaphthene	mg/l	0.00538	0.00619	54.0	37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0	34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0	48-167	15.1	26	WG611581
Benziidine	mg/l	0.00251	0.00157	25.0	10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0	46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0	39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0	39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0	42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0	42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0	10-178	21.9	40	WG611581
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Chloride	mg/l	65.5	18.0	50	95.0	80-120	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	56.7	4.60	50	104.	80-120	L593525-01	WG611294
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/l	5.92	0	5.5	108. 105.2	55-109 62-128	L593663-01	WG611405 WG611405
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	4.91	0	5	98.2	80-120	L593917-04	WG611479
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310	
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310	
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310	
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310	
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310	
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310	
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310	
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310	
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310	
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310	
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310	
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310	

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Level II

L593548

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Chloride	mg/l	67.5	65.5	99.0	80-120	3.01	20	L593591-01	WG611270
TOC (Total Organic Carbon)	mg/l	55.8	56.7	102.	80-120	1.72	20	L593525-01	WG611294
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	4.99	4.91	99.8	80-120	1.62	20	L593917-04	WG611479
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611428: R2333855: L593548-01 02

WG611310: R2333913: L593548-01 02

\* Performance of this Analyte is outside of established criteria.

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





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WG611270: R2334933: L593548-01 02  
WG611294: R2335813: L593548-01 02  
WG611526: R2336033: L593548-01 02  
WG611405: R2337235: L593548-01 02  
WG611718: R2338293: L593548-01 02  
WG611479: R2338776: L593548-01 02  
WG611577: R2339033: L593548-01 02  
WG611624: R2339313: L593548-02 02  
WG611870: R2339874: L593548-01 02  
WG611833: R2339913: L593548-01 02  
WG611509: R2339933: L593548-01 02  
WG611835: R2339973: L593548-01 02  
WG611838: R2339993: L593548-01 02  
WG611581: R2340113: L593548-01 02  
WG611391: R2340917: L593548-01 02  
WG612075: R2344074: L593548-01 02  
WG612100: R2347893: L593548-01 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.'



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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.



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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585015

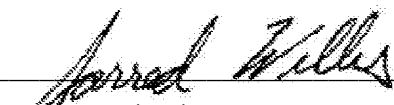
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	100	20.	mg/l	9056	07/17/12	20
Fluoride	1.9	0.10	mg/l	9056	07/14/12	1
Sulfate	1200	100	mg/l	9056	07/17/12	20
Alkalinity	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	8.1		su	9040C	07/17/12	1
Specific Conductance	3000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0054	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.021	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.010	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	34.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	0.023	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.039	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	2.3	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	3.5	0.20	mg/l	200.7	07/20/12	1
Sodium,Dissolved	660	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	1.3	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	101.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	80.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c



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

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	38.1		% Rec.	8270 C	07/18/12	1
Phenol-d5	31.9		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	72.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	80.2		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	53.7		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	82.1		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585015-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:08

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585015-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/19



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* 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  
Aaron Stacy (Olsson)  
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Grand Junction, CO 81505

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Level II

L585015

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG602990	07/17/12 06:44
Sulfate	< 5	mg/l			WG602990	07/17/12 06:44
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60		0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.		6.04	20	L585005-01	WG602809
pH	su	7.90	7.80		0.766	1	L584225-04	WG602929
pH	su	7.10	7.20		1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0		0	20	L585012-01	WG602812
Chloride	mg/l	100.	100.		0.995	20	L585015-01	WG602990
Sulfate	mg/l	1200	1200		1.68	20	L585015-01	WG602990
Sulfate	mg/l	1800	1800		0.557	20	L585249-01	WG602990
TOC (Total Organic Carbon)	mg/l	1.40	1.40		2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0		0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000		2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000		1.61	20	L585495-04	WG603320
Dissolved Solids	mg/l	200.	199.		1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691		0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0		0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0		0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240		NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400		NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100		NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0		0	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Lithium,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	0	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	0	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	0	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	0	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	0	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582

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		Known Val	Result			
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812

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

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chloride	mg/l	40	40.0	100.	90-110	WG602990
Sulfate	mg/l	40	38.8	97.0	90-110	WG602990
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benizidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743

\* Performance of this Analyte is outside of established criteria.

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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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July 29, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Alkalinity	mg/l	110.	110.	110.	85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582

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Quality Assurance Report  
Level II

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July 29, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
Chloride	mg/l	39.9	40.0	100.	90-110	0.250	20	WG602990
Sulfate	mg/l	39.3	38.8	98.0	90-110	1.28	20	WG602990
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743

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Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582

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July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		%Rec	Limit	RPD	Limit	Ref Samp	Batch
			Ref							
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20		L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128					WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20		L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20		L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20		L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20		L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20		L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21		L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20		L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20		L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20		L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20		L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20		L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20		L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20		L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20		L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22		L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20		L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20		L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20		L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20		L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20		L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20		L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20		L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20		L584961-16	WG602582

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16		WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16		WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16		WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16		WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16		WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16		WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16		WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16		WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16		WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16		WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16		WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16		WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16		WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16		WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16		WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16		WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16		WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16		WG602582
4-Bromofluorobenzene				104.2	82-120					WG602582
Dibromofluoromethane				104.6	82-126					WG602582
Toluene-d8				105.1	92-112					WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01		WG602812
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02		WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12		WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12		WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12		WG603226

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585015-01  
WG602670: R2256613: L585015-01  
WG602614: R2257834: L585015-01  
WG602809: R2257935: L585015-01  
WG602912: R2257953: L585015-01  
WG602917: R2257954: L585015-01  
WG602582: R2258253: L585015-01  
WG603037: R2258613: L585015-01  
WG602929: R2259213: L585015-01  
WG602812: R2260755: L585015-01  
WG602990: R2260993: L585015-01  
WG602923: R2261115: L585015-01  
WG603320: R2261675: L585015-01  
WG602743: R2262494: L585015-01  
WG603124: R2264154: L585015-01  
WG603226: R2264474: L585015-01  
WG604526: R2276876: L585015-01

\* \* 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**

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Est. 1970

July 29, 2012

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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585014

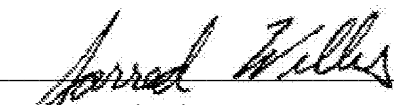
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	2.0	1.0	mg/l	9056	07/14/12	1
Chloride	650	10.	mg/l	9056	07/18/12	10
Fluoride	2.8	0.10	mg/l	9056	07/14/12	1
Sulfate	550	50.	mg/l	9056	07/18/12	10
Alkalinity	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	1.3	0.020	mg/l	RSK175	07/17/12	2
Ethane	BDL	0.026	mg/l	RSK175	07/17/12	2
Ethene	BDL	0.026	mg/l	RSK175	07/17/12	2
pH	7.9		su	9040C	07/17/12	1
Specific Conductance	3700		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.9	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2200	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.015	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.046	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.0098	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.066	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	64.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.092	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	4.6	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	0.11	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.7	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	4.2	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	740	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.1	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)  
L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	103.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	82.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c





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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	43.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	32.4		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	68.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	74.0		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	57.1		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	75.7		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585014-01 (PH) - 7.9@20.8c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585014-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:07

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585014-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/18



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG603173	07/18/12 10:05
Sulfate	< 5	mg/l			WG603173	07/18/12 10:05
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Sulfate	mg/l	450.	450.	0.222	20	L584127-05	WG603173
Sulfate	mg/l	24.0	24.0	0.416	20	L584127-09	WG603173
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Sulfate	mg/l	150.	150.	1.98	20	L584776-02	WG603173
Sulfate	mg/l	120.	120.	1.65	20	L584776-04	WG603173
Sulfate	mg/l	230.	230.	1.75	20	L584922-01	WG603173
Chloride	mg/l	640.	650.	1.86	20	L585014-01	WG603173
Sulfate	mg/l	540.	550.	1.47	20	L585014-01	WG603173
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Boron,Dissolved	mg/l	0	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	20	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	20	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	20	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury, Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
Chloride	mg/l	40	39.6	99.0	90-110	WG603173
Sulfate	mg/l	40	39.3	98.3	90-110	WG603173
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benztidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743

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Est. 1970

Quality Assurance Report  
Level II

L585014

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614

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Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
Alkalinity	mg/l	110.	110.	110.		85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.		77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.		71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.		78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.		81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.		53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0		73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.		54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.		67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.		77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.		68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.		77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.		76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.		77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0		55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.		78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
Chloride	mg/l	39.7	39.6	99.0	90-110	0.252	20	WG603173
Sulfate	mg/l	39.3	39.3	98.0	90-110	0	20	WG603173
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743

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		Result	Ref	%Rec				
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Toluene-d8					104.8	92-112		
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
Chloride	mg/l	65.4	6.50	50	118.	80-120	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium, Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron, Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium, Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium, Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt, Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper, Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron, Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium, Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium, Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese, Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel, Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium, Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium, Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium, Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium, Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc, Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon, Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony, Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic, Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum, Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium, Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene (FID)				98.95	62-128				WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16	WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16	WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16	WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16	WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16	WG602582
4-Bromofluorobenzene				104.2	82-120				WG602582
Dibromofluoromethane				104.6	82-126				WG602582
Toluene-d8				105.1	92-112				WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01	WG602812

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585014

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chloride	mg/l	66.4	65.4	120.	80-120	1.52	20	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02	WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585014-01  
WG602670: R2256613: L585014-01  
WG602614: R2257834: L585014-01  
WG602809: R2257935: L585014-01  
WG602912: R2257953: L585014-01  
WG602917: R2257954: L585014-01  
WG602582: R2258253: L585014-01  
WG603037: R2258613: L585014-01  
WG602929: R2259213: L585014-01  
WG602812: R2260755: L585014-01  
WG603173: R2260933: L585014-01  
WG602923: R2261115: L585014-01  
WG603320: R2261675: L585014-01  
WG602743: R2262494: L585014-01  
WG603124: R2264154: L585014-01  
WG603226: R2264474: L585014-01  
WG604526: R2276876: L585014-01

\* \* 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.'



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Quality Assurance Report  
Level II

L585014

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July 29, 2012

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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585012

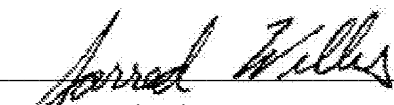
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	64.	1.0	mg/l	9056	07/14/12	1
Fluoride	1.5	0.10	mg/l	9056	07/14/12	1
Sulfate	260	25.	mg/l	9056	07/14/12	5
Alkalinity	620	100	mg/l	2320B	07/18/12	5
Alkalinity,Bicarbonate	620	20.	mg/l	2320B	07/19/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	7.5		su	9040C	07/17/12	1
Specific Conductance	1600		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.0	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	1100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0092	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.0042	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.016	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.090	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	76.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.063	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	46.	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	7.7	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	240	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.7	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585012-01 (PH) - 7.5@21.0c



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	99.2		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	103.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	81.8		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585012-01 (PH) - 7.5@21.0c



12065 Lebanon Rd.  
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(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

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Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : ESGA1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:55

ESC Sample # : L585012-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	47.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	38.0		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	78.2		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	86.4		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	62.4		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	88.3		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585012-01 (PH) - 7.5@21.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585012-01	WG602929	SAMP	pH	R2259213	T8
	WG602751	SAMP	TPH (GC/FID) Low Fraction	R2255773	J5

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
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  
07/29/12 at 12:30:10

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585012-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
Bromide	< 1	mg/l			WG602623	07/14/12 06:07
Chloride	< 1	mg/l			WG602623	07/14/12 06:07
Fluoride	< .1	mg/l			WG602623	07/14/12 06:07
Sulfate	< 5	mg/l			WG602623	07/14/12 06:07
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
Alkalinity	< 20	mg/l			WG603112	07/18/12 16:45
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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



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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	14.0	14.0	2.12	20	L585006-04	WG602623
Sulfate	mg/l	34.0	35.0	1.44	20	L585006-04	WG602623
Sulfate	mg/l	360.	360.	1.40	20	L584743-02	WG602623
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Alkalinity	mg/l	620.	620.	0.810	20	L585012-01	WG603112
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Strontium,Dissolved	mg/l	0.150	0.147	0	20		L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	20		L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	20		L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0		L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0		L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20		L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
Bromide	mg/l	40	40.6	102.	90-110	WG602623
Chloride	mg/l	40	40.4	101.	90-110	WG602623
Fluoride	mg/l	8	8.44	106.	90-110	WG602623
Sulfate	mg/l	40	40.3	101.	90-110	WG602623
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
Alkalinity	mg/l	100	110.	110.	85-115	WG603112

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		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benzidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743

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Est. 1970

Quality Assurance Report  
Level II

L585012

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
Bromide	mg/l	40.5	40.6	101.	90-110	0.247	20	WG602623
Chloride	mg/l	40.5	40.4	101.	90-110	0.247	20	WG602623
Fluoride	mg/l	8.44	8.44	106.	90-110	0	20	WG602623
Sulfate	mg/l	40.3	40.3	101.	90-110	0	20	WG602623
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585012

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037

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July 29, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
Alkalinity	mg/l	100.	110.	100.	85-115	9.52	20	WG603112
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benziidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Chloride	mg/l	52.0	0	50	104.	80-120	L584988-04	WG602623
Sulfate	mg/l	53.7	0	50	107.	80-120	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582

\* Performance of this Analyte is outside of established criteria.

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





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Quality Assurance Report  
Level II

L585012

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Alkalinity	mg/l	1700	1300	500	80.0	80-120	L584999-01	WG603112
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226

\* Performance of this Analyte is outside of established criteria.

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226

Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Chloride	mg/l	51.6	52.0	103.	80-120	0.772	20	L584988-04	WG602623
Sulfate	mg/l	53.2	53.7	106.	80-120	0.935	20	L584988-04	WG602623
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L585012

July 29, 2012

Analyte	Units	MSD	Matrix Spike	Duplicate	Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582



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Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L584999

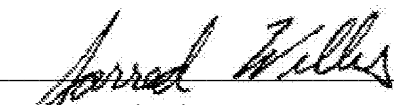
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	21.	1.0	mg/l	9056	07/14/12	1
Chloride	3700	50.	mg/l	9056	07/14/12	50
Fluoride	BDL	0.10	mg/l	9056	07/14/12	1
Sulfate	39.	5.0	mg/l	9056	07/14/12	1
Alkalinity	1300	100	mg/l	2320B	07/18/12	5
Alkalinity,Bicarbonate	1300	20.	mg/l	2320B	07/19/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	0.65	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	7.8		su	9040C	07/17/12	1
Specific Conductance	14000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	150	5.0	mg/l	9060A	07/19/12	5
Dissolved Solids	8000	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.14	0.0050	mg/l	200.8	07/27/12	5
Molybdenum,Dissolved	BDL	0.010	mg/l	200.8	07/27/12	5
Selenium,Dissolved	0.027	0.0050	mg/l	200.8	07/27/12	5
Barium,Dissolved	24.	0.0050	mg/l	200.7	07/25/12	1
Boron,Dissolved	6.9	0.20	mg/l	200.7	07/25/12	1
Calcium,Dissolved	150	0.50	mg/l	200.7	07/25/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/25/12	1
Cobalt,Dissolved	0.019	0.010	mg/l	200.7	07/25/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/25/12	1
Iron,Dissolved	0.34	0.10	mg/l	200.7	07/25/12	1
Lithium,Dissolved	3.4	0.015	mg/l	200.7	07/25/12	1
Magnesium,Dissolved	14.	0.10	mg/l	200.7	07/25/12	1
Manganese,Dissolved	0.15	0.010	mg/l	200.7	07/25/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/25/12	1
Potassium,Dissolved	32.	0.50	mg/l	200.7	07/25/12	1
Silicon,Dissolved	18.	0.20	mg/l	200.7	07/25/12	1
Sodium,Dissolved	2800	2.5	mg/l	200.7	07/25/12	5
Strontium,Dissolved	24.	0.050	mg/l	200.7	07/25/12	5
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/25/12	1
Zinc,Dissolved	0.070	0.030	mg/l	200.7	07/25/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c



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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	21.	1.0	mg/l	8015D/GRO	07/16/12	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.9		% Rec.	8015D/GRO	07/16/12	10
Volatile Organics						
Acetone	BDL	2.5	mg/l	8260B	07/14/12	50
Acrolein	BDL	2.5	mg/l	8260B	07/14/12	50
Acrylonitrile	BDL	0.50	mg/l	8260B	07/14/12	50
Benzene	1.3	0.050	mg/l	8260B	07/14/12	50
Bromobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Bromodichloromethane	BDL	0.050	mg/l	8260B	07/14/12	50
Bromoform	BDL	0.050	mg/l	8260B	07/14/12	50
Bromomethane	BDL	0.25	mg/l	8260B	07/14/12	50
n-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
sec-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
tert-Butylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Carbon tetrachloride	BDL	0.050	mg/l	8260B	07/14/12	50
Chlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Chlorodibromomethane	BDL	0.050	mg/l	8260B	07/14/12	50
Chloroethane	BDL	0.25	mg/l	8260B	07/14/12	50
2-Chloroethyl vinyl ether	BDL	2.5	mg/l	8260B	07/14/12	50
Chloroform	BDL	0.25	mg/l	8260B	07/14/12	50
Chloromethane	BDL	0.12	mg/l	8260B	07/14/12	50
2-Chlorotoluene	BDL	0.050	mg/l	8260B	07/14/12	50
4-Chlorotoluene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dibromo-3-Chloropropane	BDL	0.25	mg/l	8260B	07/14/12	50
1,2-Dibromoethane	BDL	0.050	mg/l	8260B	07/14/12	50
Dibromomethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,4-Dichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Dichlorodifluoromethane	BDL	0.25	mg/l	8260B	07/14/12	50
1,1-Dichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
cis-1,2-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
trans-1,2-Dichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
cis-1,3-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
trans-1,3-Dichloropropene	BDL	0.050	mg/l	8260B	07/14/12	50
2,2-Dichloropropane	BDL	0.050	mg/l	8260B	07/14/12	50
Di-isopropyl ether	BDL	0.050	mg/l	8260B	07/14/12	50

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Ethylbenzene	0.12	0.050	mg/l	8260B	07/14/12	50
Hexachloro-1,3-butadiene	BDL	0.050	mg/l	8260B	07/14/12	50
Isopropylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
p-Isopropyltoluene	BDL	0.050	mg/l	8260B	07/14/12	50
2-Butanone (MEK)	BDL	0.50	mg/l	8260B	07/14/12	50
Methylene Chloride	BDL	0.25	mg/l	8260B	07/14/12	50
4-Methyl-2-pentanone (MIBK)	BDL	0.50	mg/l	8260B	07/14/12	50
Methyl tert-butyl ether	BDL	0.050	mg/l	8260B	07/14/12	50
Naphthalene	BDL	0.25	mg/l	8260B	07/14/12	50
n-Propylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
Styrene	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,1,2-Tetrachloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2,2-Tetrachloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2-Trichlorotrifluoroethane	BDL	0.050	mg/l	8260B	07/14/12	50
Tetrachloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
Toluene	3.3	0.25	mg/l	8260B	07/14/12	50
1,2,3-Trichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,2,4-Trichlorobenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,1-Trichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
1,1,2-Trichloroethane	BDL	0.050	mg/l	8260B	07/14/12	50
Trichloroethene	BDL	0.050	mg/l	8260B	07/14/12	50
Trichlorofluoromethane	BDL	0.25	mg/l	8260B	07/14/12	50
1,2,3-Trichloropropane	BDL	0.12	mg/l	8260B	07/14/12	50
1,2,4-Trimethylbenzene	0.20	0.050	mg/l	8260B	07/14/12	50
1,2,3-Trimethylbenzene	BDL	0.050	mg/l	8260B	07/14/12	50
1,3,5-Trimethylbenzene	0.13	0.050	mg/l	8260B	07/14/12	50
Vinyl chloride	BDL	0.050	mg/l	8260B	07/14/12	50
Xylenes, Total	2.4	0.15	mg/l	8260B	07/14/12	50
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	07/14/12	50
Dibromofluoromethane	104.		% Rec.	8260B	07/14/12	50
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	50
TPH (GC/FID) High Fraction	6.2	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	97.1		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270C	07/17/12	1
Anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzidine	BDL	0.010	mg/l	8270C	07/17/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270C	07/17/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270C	07/17/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270C	07/17/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270C	07/17/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270C	07/17/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270C	07/17/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270C	07/17/12	1
Chrysene	BDL	0.0010	mg/l	8270C	07/17/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270C	07/17/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270C	07/17/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270C	07/17/12	1
Fluoranthene	BDL	0.0010	mg/l	8270C	07/17/12	1
Fluorene	0.0021	0.0010	mg/l	8270C	07/17/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270C	07/17/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270C	07/17/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270C	07/17/12	1
Hexachloroethane	BDL	0.010	mg/l	8270C	07/17/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
Isophorone	BDL	0.010	mg/l	8270C	07/17/12	1
Naphthalene	0.014	0.0010	mg/l	8270C	07/17/12	1
Nitrobenzene	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270C	07/17/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270C	07/17/12	1
Phenanthrene	0.0018	0.0010	mg/l	8270C	07/17/12	1
Benzylbutyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Di-n-butyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Diethyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Dimethyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Di-n-octyl phthalate	BDL	0.0010	mg/l	8270C	07/17/12	1
Pyrene	BDL	0.0010	mg/l	8270C	07/17/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270C	07/17/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270C	07/17/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dimethylphenol	0.036	0.010	mg/l	8270C	07/17/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270C	07/17/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L584999-01 (PH) - 7.8@21.2c





12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : HUNTERNOP-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 13:00

ESC Sample # : L584999-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Nitrophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Phenol	0.046	0.010	mg/l	8270C	07/17/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270C	07/17/12	1
Surrogate Recovery						
2-Fluorophenol	30.5		% Rec.	8270C	07/17/12	1
Phenol-d5	20.0		% Rec.	8270C	07/17/12	1
Nitrobenzene-d5	65.5		% Rec.	8270C	07/17/12	1
2-Fluorobiphenyl	85.4		% Rec.	8270C	07/17/12	1
2,4,6-Tribromophenol	106.		% Rec.	8270C	07/17/12	1
p-Terphenyl-d14	82.5		% Rec.	8270C	07/17/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L584999-01 (PH) - 7.8@21.2c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L584999-01	WG602929	SAMP	pH	R2259213	T8
	WG602901	SAMP	n-Nitrosodiphenylamine	R2260773	J4
	WG604526	SAMP	Molybdenum,Dissolved	R2276876	O

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
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  
07/29/12 at 12:30:05

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L584999-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/18 Added CODICP per JW 7/16/12 JE.



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L584999

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

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Chloride	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Sulfate	< 5	mg/l			WG602614	07/14/12 06:04
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37

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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
1,2,4-Trichlorobenzene	< .01	mg/l			WG602901	07/17/12 17:22
2,4,6-Trichlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dichlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dimethylphenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dinitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
2,4-Dinitrotoluene	< .01	mg/l			WG602901	07/17/12 17:22
2,6-Dinitrotoluene	< .01	mg/l			WG602901	07/17/12 17:22
2-Chloronaphthalene	< .001	mg/l			WG602901	07/17/12 17:22
2-Chlorophenol	< .01	mg/l			WG602901	07/17/12 17:22
2-Nitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
3,3-Dichlorobenzidine	< .01	mg/l			WG602901	07/17/12 17:22
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602901	07/17/12 17:22
4-Bromophenyl-phenylether	< .01	mg/l			WG602901	07/17/12 17:22
4-Chloro-3-methylphenol	< .01	mg/l			WG602901	07/17/12 17:22
4-Chlorophenyl-phenylether	< .01	mg/l			WG602901	07/17/12 17:22
4-Nitrophenol	< .01	mg/l			WG602901	07/17/12 17:22
Acenaphthene	< .001	mg/l			WG602901	07/17/12 17:22
Acenaphthylene	< .001	mg/l			WG602901	07/17/12 17:22
Anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Benzidine	< .01	mg/l			WG602901	07/17/12 17:22
Benzo(a)anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(a)pyrene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(b)fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Benzo(g,h,i)perylene	< .001	mg/l			WG602901	07/17/12 17:22

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		Units	% Rec			
Benzo(k)fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Benzylbutyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-chloroethyl)ether	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602901	07/17/12 17:22
Bis(2-ethylhexyl)phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Chrysene	< .001	mg/l			WG602901	07/17/12 17:22
Di-n-butyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Di-n-octyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Dibenz(a,h)anthracene	< .001	mg/l			WG602901	07/17/12 17:22
Diethyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Dimethyl phthalate	< .001	mg/l			WG602901	07/17/12 17:22
Fluoranthene	< .001	mg/l			WG602901	07/17/12 17:22
Fluorene	< .001	mg/l			WG602901	07/17/12 17:22
Hexachloro-1,3-butadiene	< .01	mg/l			WG602901	07/17/12 17:22
Hexachlorobenzene	< .001	mg/l			WG602901	07/17/12 17:22
Hexachlorocyclopentadiene	< .01	mg/l			WG602901	07/17/12 17:22
Hexachloroethane	< .01	mg/l			WG602901	07/17/12 17:22
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602901	07/17/12 17:22
Isophorone	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodimethylamine	< .01	mg/l			WG602901	07/17/12 17:22
n-Nitrosodiphenylamine	< .01	mg/l			WG602901	07/17/12 17:22
Naphthalene	< .001	mg/l			WG602901	07/17/12 17:22
Nitrobenzene	< .01	mg/l			WG602901	07/17/12 17:22
Pentachlorophenol	< .001	mg/l			WG602901	07/17/12 17:22
Phenanthrene	< .001	mg/l			WG602901	07/17/12 17:22
Phenol	< .01	mg/l			WG602901	07/17/12 17:22
Pyrene	< .001	mg/l			WG602901	07/17/12 17:22
2,4,6-Tribromophenol		% Rec.	98.77	16-147	WG602901	07/17/12 17:22
2-Fluorobiphenyl		% Rec.	89.64	29-127	WG602901	07/17/12 17:22
2-Fluorophenol		% Rec.	31.61	10-75	WG602901	07/17/12 17:22
Nitrobenzene-d5		% Rec.	69.52	17-119	WG602901	07/17/12 17:22
Phenol-d5		% Rec.	20.40	10-63	WG602901	07/17/12 17:22
p-Terphenyl-d14		% Rec.	102.3	40-174	WG602901	07/17/12 17:22
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
Alkalinity	< 20	mg/l			WG603112	07/18/12 16:45
Dissolved Solids	< 10	mg/l			WG602877	07/20/12 10:10
TOC (Total Organic Carbon)	< 1	mg/l			WG603332	07/19/12 09:10
Barium,Dissolved	< .005	mg/l			WG603426	07/25/12 22:09
Boron,Dissolved	< .2	mg/l			WG603426	07/25/12 22:09
Calcium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Chromium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Cobalt,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Copper,Dissolved	< .02	mg/l			WG603426	07/25/12 22:09
Iron,Dissolved	< .1	mg/l			WG603426	07/25/12 22:09
Lithium,Dissolved	< .015	mg/l			WG603426	07/25/12 22:09
Magnesium,Dissolved	< .1	mg/l			WG603426	07/25/12 22:09
Manganese,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Nickel,Dissolved	< .02	mg/l			WG603426	07/25/12 22:09
Potassium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Silicon,Dissolved	< .2	mg/l			WG603426	07/25/12 22:09
Sodium,Dissolved	< .5	mg/l			WG603426	07/25/12 22:09
Strontium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Vanadium,Dissolved	< .01	mg/l			WG603426	07/25/12 22:09
Zinc,Dissolved	< .03	mg/l			WG603426	07/25/12 22:09
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Chloride	mg/l	5.00	5.10	1.38	20	L584609-10	WG602614
Sulfate	mg/l	31.0	31.0	0.322	20	L584609-10	WG602614
Chloride	mg/l	80.0	81.0	1.62	20	L584755-01	WG602614
Chloride	mg/l	66.0	66.0	0.755	20	L584524-23	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Sulfate	mg/l	81.0	81.0	0.124	20	L584524-23	WG602614
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Alkalinity	mg/l	620.	620.	0.810	20	L585012-01	WG603112
Dissolved Solids	mg/l	190.	197.	1.53	5	L584879-08	WG602877
TOC (Total Organic Carbon)	mg/l	150.	150.	1.78	20	L584999-01	WG603332
TOC (Total Organic Carbon)	mg/l	2.10	2.00	6.30	20	L585627-02	WG603332
Barium,Dissolved	mg/l	0.0470	0.0467	1.06	20	L585179-08	WG603426
Boron,Dissolved	mg/l	0	0	0	0	L585179-08	WG603426
Calcium,Dissolved	mg/l	34.0	34.0	0.587	20	L585179-08	WG603426
Chromium,Dissolved	mg/l	0	0.00180	NA	20	L585179-08	WG603426
Cobalt,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Copper,Dissolved	mg/l	0	0.00100	NA	20	L585179-08	WG603426
Iron,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Lithium,Dissolved	mg/l	0	0.00690	NA	20	L585179-08	WG603426
Magnesium,Dissolved	mg/l	11.0	11.0	2.76	20	L585179-08	WG603426
Manganese,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Nickel,Dissolved	mg/l	0	0	0	20	L585179-08	WG603426
Potassium,Dissolved	mg/l	1.70	1.60	4.28	20	L585179-08	WG603426
Silicon,Dissolved	mg/l	1.80	1.80	1.12*	0	L585179-08	WG603426
Sodium,Dissolved	mg/l	5.70	5.70	0.351	20	L585179-08	WG603426
Strontium,Dissolved	mg/l	0.120	0.118	0.844	20	L585179-08	WG603426

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Vanadium,Dissolved	mg/l	0	0.00300		NA	20	L585179-08	WG603426
Zinc,Dissolved	mg/l	0	0.0143		NA	20	L585179-08	WG603426
Antimony,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550		NA	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Chloride	mg/l	40	40.1	100.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Sulfate	mg/l	40	39.6	99.0	90-110	WG602614

1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582

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Quality Assurance Report  
Level II

L584999

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
1,2,4-Trichlorobenzene	mg/l	.01	0.00897	89.7	34-97	WG602901
2,4,6-Trichlorophenol	mg/l	.01	0.00998	99.8	38-113	WG602901
2,4-Dichlorophenol	mg/l	.01	0.00948	94.8	46-105	WG602901
2,4-Dimethylphenol	mg/l	.01	0.00895	89.5	47-108	WG602901
2,4-Dinitrophenol	mg/l	.01	0.00525	52.5	10-121	WG602901
2,4-Dinitrotoluene	mg/l	.01	0.0103	103.	59-117	WG602901
2,6-Dinitrotoluene	mg/l	.01	0.0101	101.	57-110	WG602901
2-Chloronaphthalene	mg/l	.01	0.00972	97.2	47-106	WG602901
2-Chlorophenol	mg/l	.01	0.00741	74.1	37-90	WG602901
2-Nitrophenol	mg/l	.01	0.0100	100.	40-112	WG602901
3,3-Dichlorobenzidine	mg/l	.01	0.00960	96.0	58-116	WG602901
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00696	69.6	21-119	WG602901

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
4-Bromophenyl-phenylether	mg/l	.01	0.00969	96.9	63-120	WG602901
4-Chloro-3-methylphenol	mg/l	.01	0.00810	81.0	50-105	WG602901
4-Chlorophenyl-phenylether	mg/l	.01	0.0107	107.	58-115	WG602901
4-Nitrophenol	mg/l	.01	0.00239	23.9	10-53	WG602901
Acenaphthene	mg/l	.01	0.00976	97.6	52-107	WG602901
Acenaphthylene	mg/l	.01	0.0106	106.	55-119	WG602901
Anthracene	mg/l	.01	0.0110	110.	65-114	WG602901
Benzidine	mg/l	.01	0.00465	46.5	10-55	WG602901
Benzo(a)anthracene	mg/l	.01	0.0103	103.	68-113	WG602901
Benzo(a)pyrene	mg/l	.01	0.0101	101.	68-115	WG602901
Benzo(b)fluoranthene	mg/l	.01	0.0100	100.	67-114	WG602901
Benzo(g,h,i)perylene	mg/l	.01	0.00993	99.3	52-132	WG602901
Benzo(k)fluoranthene	mg/l	.01	0.0107	107.	62-116	WG602901
Benzylbutyl phthalate	mg/l	.01	0.0107	107.	12-166	WG602901
Bis(2-chlorethoxy)methane	mg/l	.01	0.00865	86.5	56-116	WG602901
Bis(2-chloroethyl)ether	mg/l	.01	0.00781	78.1	39-109	WG602901
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00816	81.6	43-108	WG602901
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0103	103.	61-147	WG602901
Chrysene	mg/l	.01	0.0103	103.	65-114	WG602901
Di-n-butyl phthalate	mg/l	.01	0.0107	107.	56-133	WG602901
Di-n-octyl phthalate	mg/l	.01	0.00972	97.2	59-143	WG602901
Dibenz(a,h)anthracene	mg/l	.01	0.00993	99.3	54-130	WG602901
Diethyl phthalate	mg/l	.01	0.0113	113.	33-136	WG602901
Dimethyl phthalate	mg/l	.01	0.0104	104.	10-152	WG602901
Fluoranthene	mg/l	.01	0.0105	105.	66-120	WG602901
Fluorene	mg/l	.01	0.0107	107.	58-110	WG602901
Hexachloro-1,3-butadiene	mg/l	.01	0.00966	96.6	34-115	WG602901
Hexachlorobenzene	mg/l	.01	0.00874	87.4	55-117	WG602901
Hexachlorocyclopentadiene	mg/l	.01	0.00946	94.6	20-121	WG602901
Hexachloroethane	mg/l	.01	0.00884	88.4	24-93	WG602901
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.0100	100.	56-129	WG602901
Isophorone	mg/l	.01	0.00703	70.3	55-108	WG602901
n-Nitrosodi-n-propylamine	mg/l	.01	0.00879	87.9	50-115	WG602901
n-Nitrosodimethylamine	mg/l	.01	0.00463	46.3	12-68	WG602901
n-Nitrosodiphenylamine	mg/l	.01	0.00968	96.8	55-98	WG602901
Naphthalene	mg/l	.01	0.00914	91.4	42-103	WG602901
Nitrobenzene	mg/l	.01	0.00799	79.9	39-102	WG602901
Pentachlorophenol	mg/l	.01	0.00639	63.9	10-101	WG602901
Phenanthrene	mg/l	.01	0.00973	97.3	61-110	WG602901
Phenol	mg/l	.01	0.00223	22.3	10-53	WG602901
Pyrene	mg/l	.01	0.0106	106.	65-116	WG602901
2,4,6-Tribromophenol				96.80	16-147	WG602901
2-Fluorobiphenyl				98.72	29-127	WG602901
2-Fluorophenol				34.74	10-75	WG602901
Nitrobenzene-d5				83.47	17-119	WG602901
Phenol-d5				21.62	10-63	WG602901
p-Terphenyl-d14				96.47	40-174	WG602901

Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
Alkalinity	mg/l	100	110.	110.	85-115	WG603112
Dissolved Solids	mg/l	8800	8560	97.3	85-115	WG602877
TOC (Total Organic Carbon)	mg/l	75	74.7	99.5	85-115	WG603332

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Level II

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July 29, 2012

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		Known Val	Result			
Barium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Boron,Dissolved	mg/l	1	0.977	97.7	85-115	WG603426
Calcium,Dissolved	mg/l	10	10.5	105.	85-115	WG603426
Chromium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Cobalt,Dissolved	mg/l	1	1.07	107.	85-115	WG603426
Copper,Dissolved	mg/l	1	0.977	97.7	85-115	WG603426
Iron,Dissolved	mg/l	1	0.963	96.3	85-115	WG603426
Lithium,Dissolved	mg/l	.5	0.561	112.	85-115	WG603426
Magnesium,Dissolved	mg/l	10	10.8	108.	85-115	WG603426
Manganese,Dissolved	mg/l	1	1.05	105.	85-115	WG603426
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603426
Potassium,Dissolved	mg/l	10	9.72	97.2	85-115	WG603426
Silicon,Dissolved	mg/l	1	1.06	106.	85-115	WG603426
Sodium,Dissolved	mg/l	10	10.4	104.	85-115	WG603426
Strontium,Dissolved	mg/l	1	1.03	103.	85-115	WG603426
Vanadium,Dissolved	mg/l	1	1.00	100.	85-115	WG603426
Zinc,Dissolved	mg/l	1	1.07	107.	85-115	WG603426
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
				98.52	62-128			WG602751
TPH (GC/FID) High Fraction o-Terphenyl	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Chloride	mg/l	40.1	40.1	100.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Sulfate	mg/l	39.5	39.6	99.0	90-110	0.253	20	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.	78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.	81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.	53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0	73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.	54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.	67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.	77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.	68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.	77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.	76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.	77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0	55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.	78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.	82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0	69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.	77-121	9.55	20	WG602582

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.	78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.	77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.	78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.	79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.	63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0	58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0	26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.	78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.	78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0	58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0	49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0	10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0	53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.	72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.	76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.	75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.	61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.	42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0	63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.	78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.	73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.	52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.	76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.	50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.	75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.	74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.	66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0	77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0	33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.	77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.	71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.	74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0	67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.	67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.	74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.	77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0	70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.	77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.	77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.	69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.	76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.	69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.	75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
pH	su	5.79	5.79	102*		98-101	0	20	WG602929
1,2,4-Trichlorobenzene	mg/l	0.00946	0.00897	94.0		34-97	5.28	21	WG602901
2,4,6-Trichlorophenol	mg/l	0.0105	0.00998	105.		38-113	4.86	29	WG602901
2,4-Dichlorophenol	mg/l	0.00992	0.00948	99.0		46-105	4.53	20	WG602901
2,4-Dimethylphenol	mg/l	0.00923	0.00895	92.0		47-108	2.98	20	WG602901
2,4-Dinitrophenol	mg/l	0.00565	0.00525	56.0		10-121	7.33	40	WG602901
2,4-Dinitrotoluene	mg/l	0.0105	0.0103	105.		59-117	1.28	20	WG602901
2,6-Dinitrotoluene	mg/l	0.0100	0.0101	100.		57-110	1.06	20	WG602901
2-Chloronaphthalene	mg/l	0.00938	0.00972	94.0		47-106	3.55	20	WG602901
2-Chlorophenol	mg/l	0.00767	0.00741	77.0		37-90	3.47	21	WG602901
2-Nitrophenol	mg/l	0.0106	0.0100	106.		40-112	5.54	22	WG602901
3,3-Dichlorobenzidine	mg/l	0.00968	0.00960	97.0		58-116	0.803	20	WG602901
4,6-Dinitro-2-methylphenol	mg/l	0.00877	0.00696	88.0		21-119	23.0	40	WG602901
4-Bromophenyl-phenylether	mg/l	0.0101	0.00969	101.		63-120	3.97	20	WG602901
4-Chloro-3-methylphenol	mg/l	0.00865	0.00810	86.0		50-105	6.58	20	WG602901
4-Chlorophenyl-phenylether	mg/l	0.0102	0.0107	102.		58-115	5.08	20	WG602901
4-Nitrophenol	mg/l	0.00254	0.00239	25.0		10-53	5.79	40	WG602901
Acenaphthene	mg/l	0.00989	0.00976	99.0		52-107	1.37	20	WG602901
Acenaphthylene	mg/l	0.0103	0.0106	103.		55-119	2.94	20	WG602901
Anthracene	mg/l	0.0113	0.0110	113.		65-114	2.65	20	WG602901
Benzo(a)anthracene	mg/l	0.00499	0.00465	50.0		10-55	7.05	40	WG602901
Benzo(a)pyrene	mg/l	0.0102	0.0103	102.		68-113	0.559	20	WG602901
Benzo(b)fluoranthene	mg/l	0.0103	0.0101	102.		68-115	1.71	20	WG602901
Benzo(g,h,i)perylene	mg/l	0.0102	0.0100	102.		67-114	1.24	20	WG602901
Benzo(k)fluoranthene	mg/l	0.00973	0.00993	97.0		52-132	2.01	20	WG602901
Benzylbutyl phthalate	mg/l	0.0107	0.0107	107.		62-116	0.236	20	WG602901
Benzylbutyl phthalate	mg/l	0.0103	0.0107	103.		12-166	3.52	20	WG602901
Bis(2-chlorethoxy)methane	mg/l	0.00879	0.00865	88.0		56-116	1.67	20	WG602901
Bis(2-chloroethyl)ether	mg/l	0.00842	0.00781	84.0		39-109	7.45	23	WG602901
Bis(2-chloroisopropyl)ether	mg/l	0.00829	0.00816	83.0		43-108	1.60	20	WG602901
Bis(2-ethylhexyl)phthalate	mg/l	0.0105	0.0103	105.		61-147	2.21	20	WG602901
Chrysene	mg/l	0.0109	0.0103	109.		65-114	6.33	20	WG602901
Di-n-butyl phthalate	mg/l	0.0120	0.0107	120.		56-133	10.9	20	WG602901
Di-n-octyl phthalate	mg/l	0.00997	0.00972	100.		59-143	2.54	20	WG602901
Dibenz(a,h)anthracene	mg/l	0.00996	0.00993	100.		54-130	0.347	20	WG602901
Diethyl phthalate	mg/l	0.0111	0.0113	110.		33-136	2.07	20	WG602901
Dimethyl phthalate	mg/l	0.0105	0.0104	105.		10-152	1.17	22	WG602901
Fluoranthene	mg/l	0.0113	0.0105	113.		66-120	7.50	20	WG602901
Fluorene	mg/l	0.0108	0.0107	108.		58-110	0.287	20	WG602901
Hexachloro-1,3-butadiene	mg/l	0.00966	0.00966	96.0		34-115	0.0179	22	WG602901
Hexachlorobenzene	mg/l	0.00923	0.00874	92.0		55-117	5.37	20	WG602901
Hexachlorocyclopentadiene	mg/l	0.00928	0.00946	93.0		20-121	1.87	27	WG602901
Hexachloroethane	mg/l	0.00856	0.00884	86.0		24-93	3.24	25	WG602901
Indeno(1,2,3-cd)pyrene	mg/l	0.00999	0.0100	100.		56-129	0.584	20	WG602901
Isophorone	mg/l	0.00731	0.00703	73.0		55-108	3.99	20	WG602901
n-Nitrosodi-n-propylamine	mg/l	0.00880	0.00879	88.0		50-115	0.125	20	WG602901
n-Nitrosodimethylamine	mg/l	0.00462	0.00463	46.0		12-68	0.261	31	WG602901
n-Nitrosodiphenylamine	mg/l	0.0102	0.00968	102*		55-98	5.39	20	WG602901
Naphthalene	mg/l	0.00890	0.00914	89.0		42-103	2.63	20	WG602901
Nitrobenzene	mg/l	0.00803	0.00799	80.0		39-102	0.487	20	WG602901
Pentachlorophenol	mg/l	0.00742	0.00639	74.0		10-101	14.9	40	WG602901
Phenanthrene	mg/l	0.0105	0.00973	105.		61-110	7.44	20	WG602901
Phenol	mg/l	0.00234	0.00223	23.0		10-53	4.78	20	WG602901
Pyrene	mg/l	0.0106	0.0106	106.		65-116	0.393	20	WG602901
2,4,6-Tribromophenol				106.8		16-147			WG602901
2-Fluorobiphenyl				94.98		29-127			WG602901
2-Fluorophenol				35.70		10-75			WG602901

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July 29, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Nitrobenzene-d5				84.12	17-119			
Phenol-d5				22.25	10-63			
p-Terphenyl-d14				98.20	40-174			
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
Alkalinity	mg/l	100.	110.	100.	85-115	9.52	20	WG603112
Dissolved Solids	mg/l	8650	8560	98.0	85-115	1.02	20	WG602877
TOC (Total Organic Carbon)	mg/l	74.5	74.7	99.0	85-115	0.201	20	WG603332

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
Chloride	mg/l	55.9	5.10	50	102.	80-120	L584609-09	WG602614
Sulfate	mg/l	73.1	23.0	50	100.	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Alkalinity	mg/l	1700	1300	500	80.0	80-120	L584999-01	WG603112
TOC (Total Organic Carbon)	mg/l	51.7	1.50	50	100.	80-120	L585184-08	WG603332
Barium,Dissolved	mg/l	1.07	0.0467	1	102.	75-125	L585179-08	WG603426
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L585179-08	WG603426
Calcium,Dissolved	mg/l	44.3	34.0	10	103.	75-125	L585179-08	WG603426
Chromium,Dissolved	mg/l	1.03	0.00180	1	103.	75-125	L585179-08	WG603426
Cobalt,Dissolved	mg/l	1.06	0	1	106.	75-125	L585179-08	WG603426
Copper,Dissolved	mg/l	0.980	0.00100	1	97.9	75-125	L585179-08	WG603426
Iron,Dissolved	mg/l	0.974	0	1	97.4	75-125	L585179-08	WG603426
Lithium,Dissolved	mg/l	0.561	0.00690	.5	111.	75-125	L585179-08	WG603426
Magnesium,Dissolved	mg/l	21.2	11.0	10	102.	75-125	L585179-08	WG603426
Manganese,Dissolved	mg/l	1.04	0	1	104.	75-125	L585179-08	WG603426
Nickel,Dissolved	mg/l	0.908	0	1	90.8	75-125	L585179-08	WG603426
Potassium,Dissolved	mg/l	11.4	1.60	10	98.0	75-125	L585179-08	WG603426
Silicon,Dissolved	mg/l	2.89	1.80	1	109.	75-125	L585179-08	WG603426
Sodium,Dissolved	mg/l	16.0	5.70	10	103.	75-125	L585179-08	WG603426

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July 29, 2012

Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref	Res					
Strontium,Dissolved	mg/l	1.15	0.118		1	103.	75-125	L585179-08	WG603426
Vanadium,Dissolved	mg/l	1.01	0.00300		1	101.	75-125	L585179-08	WG603426
Zinc,Dissolved	mg/l	1.09	0.0143		1	108.	75-125	L585179-08	WG603426
Antimony,Dissolved	mg/l	0.0468	0		.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0		.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550		.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0		.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20	L584609-09	WG602614
Chloride	mg/l	55.0	55.9	99.8	80-120	1.62	20	L584609-09	WG602614
Sulfate	mg/l	72.2	73.1	98.4	80-120	1.24	20	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582

\* Performance of this Analyte is outside of established criteria.

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report  
Level II

L584999

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16	WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16	WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16	WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16	WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16	WG602582
4-Bromofluorobenzene				104.2	82-120				WG602582
Dibromofluoromethane				104.6	82-126				WG602582
Toluene-d8				105.1	92-112				WG602582
Alkalinity	mg/l	1800	1700	100.	80-120	5.71	20	L584999-01	WG603112
TOC (Total Organic Carbon)	mg/l	54.5	51.7	106.	80-120	5.25	20	L585184-08	WG603332
Barium,Dissolved	mg/l	1.07	1.07	102.	75-125	0	20	L585179-08	WG603426
Boron,Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L585179-08	WG603426
Calcium,Dissolved	mg/l	43.9	44.3	99.0	75-125	0.907	20	L585179-08	WG603426
Chromium,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L585179-08	WG603426
Cobalt,Dissolved	mg/l	1.06	1.06	106.	75-125	0	20	L585179-08	WG603426
Copper,Dissolved	mg/l	0.991	0.980	99.0	75-125	1.12	20	L585179-08	WG603426
Iron,Dissolved	mg/l	0.975	0.974	97.5	75-125	0.103	20	L585179-08	WG603426
Lithium,Dissolved	mg/l	0.566	0.561	112.	75-125	0.887	20	L585179-08	WG603426
Magnesium,Dissolved	mg/l	21.2	21.2	102.	75-125	0	20	L585179-08	WG603426
Manganese,Dissolved	mg/l	1.05	1.04	105.	75-125	0.957	20	L585179-08	WG603426
Nickel,Dissolved	mg/l	0.930	0.908	93.0	75-125	2.39	20	L585179-08	WG603426
Potassium,Dissolved	mg/l	11.4	11.4	98.0	75-125	0	20	L585179-08	WG603426
Silicon,Dissolved	mg/l	2.86	2.89	106.	75-125	1.04	20	L585179-08	WG603426
Sodium,Dissolved	mg/l	16.0	16.0	103.	75-125	0	20	L585179-08	WG603426
Strontium,Dissolved	mg/l	1.15	1.15	103.	75-125	0	20	L585179-08	WG603426
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L585179-08	WG603426
Zinc,Dissolved	mg/l	1.09	1.09	108.	75-125	0	20	L585179-08	WG603426

\* 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  
Aaron Stacy (Olsson)  
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Grand Junction, CO 81505

Quality Assurance Report  
Level II

L584999

12065 Lebanon Rd.  
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(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L584999-01  
WG602670: R2256613: L584999-01  
WG602614: R2257834: L584999-01  
WG602912: R2257953: L584999-01  
WG602582: R2258253: L584999-01  
WG603037: R2258613: L584999-01  
WG602929: R2259213: L584999-01  
WG602901: R2260773: L584999-01  
WG603320: R2261675: L584999-01  
WG603112: R2262454: L584999-01  
WG603133: R2262473: L584999-01  
WG602877: R2264173: L584999-01  
WG603332: R2264373: L584999-01  
WG603426: R2272613: L584999-01  
WG604526: R2276876: L584999-01

\* \* Calculations are performed prior to rounding of reported values.

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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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Monday July 16, 2012

Report Number: L583596

Samples Received: 07/06/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/07/12	1
Chloride	28.	1.0	mg/l	9056	07/07/12	1
Fluoride	2.1	0.10	mg/l	9056	07/07/12	1
Sulfate	150	10.	mg/l	9056	07/09/12	2
Alkalinity	540	100	mg/l	2320B	07/10/12	5
Alkalinity,Bicarbonate	540	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/10/12	1
Methane	BDL	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	7.7		su	9040C	07/09/12	1
Specific Conductance	1300		umhos/cm	9050A	07/13/12	1
TOC (Total Organic Carbon)	4.7	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	820	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Arsenic,Dissolved	0.0020	0.0010	mg/l	200.8	07/13/12	1
Molybdenum,Dissolved	0.012	0.0020	mg/l	200.8	07/13/12	1
Selenium,Dissolved	0.017	0.0010	mg/l	200.8	07/13/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.062	0.0050	mg/l	200.7	07/13/12	1
Boron,Dissolved	0.26	0.20	mg/l	200.7	07/13/12	1
Calcium,Dissolved	50.	0.50	mg/l	200.7	07/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/13/12	1
Lithium,Dissolved	0.055	0.015	mg/l	200.7	07/16/12	1
Magnesium,Dissolved	51.	0.10	mg/l	200.7	07/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/13/12	1
Silicon,Dissolved	16.	0.20	mg/l	200.7	07/13/12	1
Sodium,Dissolved	190	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	2.2	0.010	mg/l	200.7	07/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.032	0.030	mg/l	200.7	07/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8015D/GRO	07/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/06/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/06/12	1
Dibromofluoromethane	108.		% Rec.	8260B	07/06/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	07/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	94.6		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583596-01 (PH) - 7.7@18.0c



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

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 16, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHEWW-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 11:20

ESC Sample # : L583596-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	42.1		% Rec.	8270 C	07/10/12	1
Phenol-d5	33.8		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	75.5		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	90.0		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	70.1		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	98.2		% Rec.	8270 C	07/10/12	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: 07/16/12 15:58 Printed: 07/16/12 15:58  
L583596-01 (PH) - 7.7@18.0c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L583596-01	WG601565	SAMP	pH	R2246534	T8
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
07/16/12 at 15:58:53

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L583596-01 Account: ENCRCO Received: 07/06/12 09:00 Due Date: 07/13/12 00:00 RPT Date: 07/16/12 15:58  
Removed Nitrate and Nitrite per AS. jw 7/16



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG601549	07/07/12 13:38
Ethene	< .013	mg/l			WG601549	07/07/12 13:38
Methane	< .01	mg/l			WG601549	07/07/12 13:38
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,1-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG601474	07/06/12 20:10
1,2-Dibromoethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,3,5-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,4-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
2,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
2-Butanone (MEK)	< .01	mg/l			WG601474	07/06/12 20:10
2-Chloroethyl vinyl ether	< .05	mg/l			WG601474	07/06/12 20:10
2-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG601474	07/06/12 20:10
Acetone	< .05	mg/l			WG601474	07/06/12 20:10
Acrolein	< .025	mg/l			WG601474	07/06/12 20:10
Acrylonitrile	< .01	mg/l			WG601474	07/06/12 20:10
Benzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromodichloromethane	< .001	mg/l			WG601474	07/06/12 20:10
Bromoform	< .001	mg/l			WG601474	07/06/12 20:10
Bromomethane	< .005	mg/l			WG601474	07/06/12 20:10
Carbon tetrachloride	< .001	mg/l			WG601474	07/06/12 20:10
Chlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Chlorodibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Chloroethane	< .005	mg/l			WG601474	07/06/12 20:10
Chloroform	< .005	mg/l			WG601474	07/06/12 20:10
Chloromethane	< .0025	mg/l			WG601474	07/06/12 20:10
cis-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
cis-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Di-isopropyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Dibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Dichlorodifluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Ethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Hexachloro-1,3-butadiene	< .001	mg/l			WG601474	07/06/12 20:10
Isopropylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Methyl tert-butyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Methylene Chloride	< .005	mg/l			WG601474	07/06/12 20:10
n-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
n-Propylbenzene	< .001	mg/l			WG601474	07/06/12 20:10

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG601474	07/06/12 20:10
p-Isopropyltoluene	< .001	mg/l			WG601474	07/06/12 20:10
sec-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Styrene	< .001	mg/l			WG601474	07/06/12 20:10
tert-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Tetrachloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Toluene	< .005	mg/l			WG601474	07/06/12 20:10
trans-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
trans-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Trichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Trichlorofluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Vinyl chloride	< .001	mg/l			WG601474	07/06/12 20:10
Xylenes, Total	< .003	mg/l			WG601474	07/06/12 20:10
4-Bromofluorobenzene		% Rec.	109.6	82-120	WG601474	07/06/12 20:10
Dibromofluoromethane		% Rec.	106.0	82-126	WG601474	07/06/12 20:10
Toluene-d8		% Rec.	103.7	92-112	WG601474	07/06/12 20:10
Bromide	< 1	mg/l			WG601502	07/07/12 06:56
Chloride	< 1	mg/l			WG601502	07/07/12 06:56
Fluoride	< .1	mg/l			WG601502	07/07/12 06:56
TPH (GC/FID) Low Fraction	< .1	mg/l			WG601602	07/08/12 17:47
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	62-128	WG601602	07/08/12 17:47
pH	4.28	su			WG601565	07/09/12 14:31
Sulfate	< 5	mg/l			WG601787	07/09/12 15:40
Alkalinity	< 20	mg/l			WG601754	07/10/12 07:30
TOC (Total Organic Carbon)	< 1	mg/l			WG601789	07/10/12 15:33
Dissolved Solids	< 10	mg/l			WG601740	07/11/12 14:44
1,2,4-Trichlorobenzene	< .01	mg/l			WG601533	07/10/12 19:34
2,4,6-Trichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dimethylphenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2,6-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2-Chloronaphthalene	< .001	mg/l			WG601533	07/10/12 19:34
2-Chlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
3,3-Dichlorobenzidine	< .01	mg/l			WG601533	07/10/12 19:34
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Bromophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Chloro-3-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Chlorophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
Acenaphthene	< .001	mg/l			WG601533	07/10/12 19:34

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July 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthylene	< .001	mg/l			WG601533	07/10/12 19:34
Anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzidine	< .01	mg/l			WG601533	07/10/12 19:34
Benzo(a)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(a)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(b)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(g,h,i)perylene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(k)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzylbutyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Bis(2-chlorethoxy)methane	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroethyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Chrysene	< .001	mg/l			WG601533	07/10/12 19:34
Di-n-butyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Di-n-octyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dibenz(a,h)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Diethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dimethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Fluorene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachloro-1,3-butadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachlorobenzene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachlorocyclopentadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachloroethane	< .01	mg/l			WG601533	07/10/12 19:34
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Isophorone	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodi-n-propylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodimethylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodiphenylamine	< .01	mg/l			WG601533	07/10/12 19:34
Naphthalene	< .001	mg/l			WG601533	07/10/12 19:34
Nitrobenzene	< .01	mg/l			WG601533	07/10/12 19:34
Pentachlorophenol	< .001	mg/l			WG601533	07/10/12 19:34
Phenanthrene	< .001	mg/l			WG601533	07/10/12 19:34
Phenol	< .01	mg/l			WG601533	07/10/12 19:34
Pyrene	< .001	mg/l			WG601533	07/10/12 19:34
2,4,6-Tribromophenol		% Rec.	79.49	16-147	WG601533	07/10/12 19:34
2-Fluorobiphenyl		% Rec.	89.38	29-127	WG601533	07/10/12 19:34
2-Fluorophenol		% Rec.	45.06	10-75	WG601533	07/10/12 19:34
Nitrobenzene-d5		% Rec.	82.43	17-119	WG601533	07/10/12 19:34
Phenol-d5		% Rec.	32.67	10-63	WG601533	07/10/12 19:34
p-Terphenyl-d14		% Rec.	93.01	40-174	WG601533	07/10/12 19:34
TPH (GC/FID) High Fraction	< .1	ppm			WG601857	07/11/12 22:42
o-Terphenyl		% Rec.	105.6	50-150	WG601857	07/11/12 22:42
Mercury,Dissolved	< .0002	mg/l			WG602022	07/12/12 22:10
Barium,Dissolved	< .005	mg/l			WG602246	07/13/12 11:07
Boron,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Calcium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Chromium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Cobalt,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Copper,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Iron,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07
Magnesium,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Manganese,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Nickel,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Potassium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Silicon,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Sodium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Strontium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Vanadium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Zinc,Dissolved	< .03	mg/l			WG602246	07/13/12 11:07
Specific Conductance	1.42	umhos/cm			WG602349	07/13/12 14:32
Antimony,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Arsenic,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Molybdenum,Dissolved	< .002	mg/l			WG602266	07/13/12 19:17
Selenium,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	16.0	17.0	2.99	20	L583531-01	WG601502
Chloride	mg/l	0	0	0	20	L583531-02	WG601502
pH	su	7.80	7.80	0.385	1	L583500-02	WG601565
pH	su	8.40	8.40	0.357	1	L583831-10	WG601565
Sulfate	mg/l	150.	150.	0.664	20	L583596-01	WG601787
Alkalinity	mg/l	280.	280.	1.77	20	L583651-01	WG601754
Alkalinity	mg/l	590.	600.	1.34	20	L583819-04	WG601754
TOC (Total Organic Carbon)	mg/l	270.	260.	3.33	20	L582994-04	WG601789
TOC (Total Organic Carbon)	mg/l	210.	220.	4.22	20	L583672-01	WG601789
Dissolved Solids	mg/l	15.0	15.0	0	5	L583641-05	WG601740
Mercury,Dissolved	mg/l	0	0	0	20	L583595-01	WG602022
Barium,Dissolved	mg/l	0.0220	0.0214	2.31	20	L583784-01	WG602246
Boron,Dissolved	mg/l	0	0.0112	NA	0	L583784-01	WG602246
Calcium,Dissolved	mg/l	18.0	17.8	1.12	20	L583784-01	WG602246
Chromium,Dissolved	mg/l	0	0.00210	NA	20	L583784-01	WG602246
Cobalt,Dissolved	mg/l	0	0.00270	NA	20	L583784-01	WG602246
Copper,Dissolved	mg/l	0	0.00740	NA	20	L583784-01	WG602246
Iron,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Magnesium,Dissolved	mg/l	1.60	1.53	5.10	20	L583784-01	WG602246
Manganese,Dissolved	mg/l	0	0.00460	NA	20	L583784-01	WG602246
Nickel,Dissolved	mg/l	0	0.000600	NA	20	L583784-01	WG602246
Potassium,Dissolved	mg/l	1.00	1.06	6.23	20	L583784-01	WG602246
Silicon,Dissolved	mg/l	1.60	1.57	1.89*	0	L583784-01	WG602246
Sodium,Dissolved	mg/l	3.00	2.96	1.68	20	L583784-01	WG602246

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Strontium,Dissolved	mg/l	0.0470	0.0488	3.33	20	L583784-01	WG602246
Vanadium,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Zinc,Dissolved	mg/l	0.220	0.210	2.82	20	L583784-01	WG602246
Specific Conductance	umhos/cm	5.10	5.00	1.39	20	L583454-02	WG602349
Specific Conductance	umhos/cm	6000	6100	1.15	20	L584342-01	WG602349
Antimony,Dissolved	mg/l	0.00160	0.00180	9.91	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0460	0.0520	12.0	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0120	0.0121	5.08*	0	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.80	1.90	5.41	20	L584127-02	WG602266

Analyte	Units	Laboratory Control		% Rec	Limit	Batch
		Known Val	Sample Result			
Ethane	mg/l	.645	0.705	109.	70-130	WG601549
Ethene	mg/l	.635	0.678	107.	70-130	WG601549
Methane	mg/l	.339	0.361	107.	70-130	WG601549
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0285	114.	77-128	WG601474
1,1,1-Trichloroethane	mg/l	.025	0.0292	117.	71-126	WG601474
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0281	112.	78-130	WG601474
1,1,2-Trichloroethane	mg/l	.025	0.0277	111.	81-121	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0313	125.	53-143	WG601474
1,1-Dichloroethane	mg/l	.025	0.0279	111.	73-123	WG601474
1,1-Dichloroethene	mg/l	.025	0.0294	118.	54-134	WG601474
1,1-Dichloropropene	mg/l	.025	0.0278	111.	67-127	WG601474
1,2,3-Trichlorobenzene	mg/l	.025	0.0265	106.	77-130	WG601474
1,2,3-Trichloropropane	mg/l	.025	0.0309	123.	68-130	WG601474
1,2,3-Trimethylbenzene	mg/l	.025	0.0264	105.	77-126	WG601474
1,2,4-Trichlorobenzene	mg/l	.025	0.0266	106.	76-127	WG601474
1,2,4-Trimethylbenzene	mg/l	.025	0.0293	117.	77-129	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0254	102.	55-142	WG601474
1,2-Dibromoethane	mg/l	.025	0.0289	116.	78-124	WG601474
1,2-Dichlorobenzene	mg/l	.025	0.0257	103.	82-121	WG601474
1,2-Dichloroethane	mg/l	.025	0.0288	115.	69-128	WG601474
1,2-Dichloropropane	mg/l	.025	0.0280	112.	77-121	WG601474
1,3,5-Trimethylbenzene	mg/l	.025	0.0293	117.	78-127	WG601474
1,3-Dichlorobenzene	mg/l	.025	0.0282	113.	77-127	WG601474
1,3-Dichloropropane	mg/l	.025	0.0281	112.	78-117	WG601474
1,4-Dichlorobenzene	mg/l	.025	0.0258	103.	79-117	WG601474
2,2-Dichloropropane	mg/l	.025	0.0262	105.	63-130	WG601474
2-Butanone (MEK)	mg/l	.125	0.147	118.	58-144	WG601474
2-Chloroethyl vinyl ether	mg/l	.125	0.114	90.9	26-172	WG601474
2-Chlorotoluene	mg/l	.025	0.0279	112.	78-123	WG601474
4-Chlorotoluene	mg/l	.025	0.0286	114.	78-122	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.147	118.	58-147	WG601474
Acetone	mg/l	.125	0.151	121.	49-153	WG601474
Acrolein	mg/l	.125	0.126	101.	10-181	WG601474
Acrylonitrile	mg/l	.125	0.144	115.	53-153	WG601474
Benzene	mg/l	.025	0.0259	104.	72-119	WG601474
Bromobenzene	mg/l	.025	0.0280	112.	76-121	WG601474
Bromodichloromethane	mg/l	.025	0.0274	109.	75-127	WG601474
Bromoform	mg/l	.025	0.0276	110.	61-136	WG601474
Bromomethane	mg/l	.025	0.0317	127.	42-172	WG601474
Carbon tetrachloride	mg/l	.025	0.0300	120.	63-129	WG601474

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0281	112.	78-123	WG601474
Chlorodibromomethane	mg/l	.025	0.0277	111.	73-128	WG601474
Chloroethane	mg/l	.025	0.0299	120.	52-164	WG601474
Chloroform	mg/l	.025	0.0278	111.	76-122	WG601474
Chloromethane	mg/l	.025	0.0276	110.	50-141	WG601474
cis-1,2-Dichloroethene	mg/l	.025	0.0283	113.	75-121	WG601474
cis-1,3-Dichloropropene	mg/l	.025	0.0276	110.	74-124	WG601474
Di-isopropyl ether	mg/l	.025	0.0277	111.	66-129	WG601474
Dibromomethane	mg/l	.025	0.0277	111.	77-124	WG601474
Dichlorodifluoromethane	mg/l	.025	0.0330	132.	33-173	WG601474
Ethylbenzene	mg/l	.025	0.0280	112.	77-124	WG601474
Hexachloro-1,3-butadiene	mg/l	.025	0.0271	108.	71-134	WG601474
Isopropylbenzene	mg/l	.025	0.0286	115.	74-126	WG601474
Methyl tert-butyl ether	mg/l	.025	0.0303	121.	67-127	WG601474
Methylene Chloride	mg/l	.025	0.0278	111.	67-122	WG601474
n-Butylbenzene	mg/l	.025	0.0267	107.	74-130	WG601474
n-Propylbenzene	mg/l	.025	0.0279	112.	77-125	WG601474
Naphthalene	mg/l	.025	0.0268	107.	70-134	WG601474
p-Isopropyltoluene	mg/l	.025	0.0298	119.	77-132	WG601474
sec-Butylbenzene	mg/l	.025	0.0292	117.	77-130	WG601474
Styrene	mg/l	.025	0.0268	107.	69-145	WG601474
tert-Butylbenzene	mg/l	.025	0.0295	118.	76-131	WG601474
Tetrachloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Toluene	mg/l	.025	0.0273	109.	75-114	WG601474
trans-1,2-Dichloroethene	mg/l	.025	0.0284	113.	63-127	WG601474
trans-1,3-Dichloropropene	mg/l	.025	0.0272	109.	69-124	WG601474
Trichloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Trichlorofluoromethane	mg/l	.025	0.0140	56.0	53-161	WG601474
Vinyl chloride	mg/l	.025	0.0282	113.	55-142	WG601474
Xylenes, Total	mg/l	.075	0.0849	113.	77-123	WG601474
4-Bromofluorobenzene				109.2	82-120	WG601474
Dibromofluoromethane				102.0	82-126	WG601474
Toluene-d8				102.7	92-112	WG601474
Bromide	mg/l	40	41.3	103.	90-110	WG601502
Chloride	mg/l	40	40.0	100.	90-110	WG601502
Fluoride	mg/l	8	8.12	102.	90-110	WG601502
TPH (GC/FID) Low Fraction	mg/l	5.5	6.37	116.	70-124	WG601602
a,a,a-Trifluorotoluene(FID)				109.0	62-128	WG601602
pH	su	5.7	5.71	100.	98-101	WG601565
Sulfate	mg/l	40	39.7	99.3	90-110	WG601787
Alkalinity	mg/l	100	95.7	95.7	85-115	WG601754
TOC (Total Organic Carbon)	mg/l	75	77.2	103.	85-115	WG601789
Dissolved Solids	mg/l	8800	8730	99.2	85-115	WG601740

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Quality Assurance Report  
Level II

L583596

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00564	56.4	18-130	WG601533
2,4,6-Trichlorophenol	mg/l	.01	0.00700	70.0	12-147	WG601533
2,4-Dichlorophenol	mg/l	.01	0.00748	74.8	10-157	WG601533
2,4-Dimethylphenol	mg/l	.01	0.00799	79.9	19-160	WG601533
2,4-Dinitrophenol	mg/l	.01	0.00682	68.2	10-135	WG601533
2,4-Dinitrotoluene	mg/l	.01	0.00661	66.1	30-168	WG601533
2,6-Dinitrotoluene	mg/l	.01	0.00666	66.6	32-163	WG601533
2-Chloronaphthalene	mg/l	.01	0.00797	79.7	29-149	WG601533
2-Chlorophenol	mg/l	.01	0.00598	59.8	16-129	WG601533
2-Nitrophenol	mg/l	.01	0.00714	71.4	14-158	WG601533
3,3-Dichlorobenzidine	mg/l	.01	0.00746	74.6	42-150	WG601533
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00750	75.0	10-164	WG601533
4-Bromophenyl-phenylether	mg/l	.01	0.00874	87.4	40-166	WG601533
4-Chloro-3-methylphenol	mg/l	.01	0.00762	76.2	14-158	WG601533
4-Chlorophenyl-phenylether	mg/l	.01	0.00868	86.8	39-155	WG601533
4-Nitrophenol	mg/l	.01	0.00100	10.0	10-61	WG601533
Acenaphthene	mg/l	.01	0.00885	88.5	37-159	WG601533
Acenaphthylene	mg/l	.01	0.00788	78.8	34-162	WG601533
Anthracene	mg/l	.01	0.00871	87.1	48-167	WG601533
Benzidine	mg/l	.01	0.00254	25.4	10-86	WG601533
Benzo(a)anthracene	mg/l	.01	0.00921	92.1	46-167	WG601533
Benzo(a)pyrene	mg/l	.01	0.00878	87.8	39-167	WG601533
Benzo(b)fluoranthene	mg/l	.01	0.00891	89.1	39-173	WG601533
Benzo(g,h,i)perylene	mg/l	.01	0.00891	89.1	42-181	WG601533
Benzo(k)fluoranthene	mg/l	.01	0.00955	95.5	42-178	WG601533
Benzylbutyl phthalate	mg/l	.01	0.0101	101.	10-178	WG601533
Bis(2-chlorethoxy)methane	mg/l	.01	0.00863	86.3	34-155	WG601533
Bis(2-chloroethyl)ether	mg/l	.01	0.00693	69.3	22-149	WG601533
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00720	72.0	26-149	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0116	116.	42-191	WG601533
Chrysene	mg/l	.01	0.00966	96.6	46-170	WG601533
Di-n-butyl phthalate	mg/l	.01	0.0100	100.	33-175	WG601533
Di-n-octyl phthalate	mg/l	.01	0.00937	93.7	40-170	WG601533
Dibenz(a,h)anthracene	mg/l	.01	0.00881	88.1	43-187	WG601533
Diethyl phthalate	mg/l	.01	0.0103	103.	10-182	WG601533
Dimethyl phthalate	mg/l	.01	0.00998	99.8	10-165	WG601533
Fluoranthene	mg/l	.01	0.00930	93.0	46-171	WG601533
Fluorene	mg/l	.01	0.00890	89.0	39-163	WG601533
Hexachloro-1,3-butadiene	mg/l	.01	0.00560	56.0	18-136	WG601533
Hexachlorobenzene	mg/l	.01	0.00859	85.9	38-163	WG601533
Hexachlorocyclopentadiene	mg/l	.01	0.00412	41.2	10-142	WG601533
Hexachloroethane	mg/l	.01	0.00459	45.9	10-130	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00879	87.9	42-184	WG601533
Isophorone	mg/l	.01	0.00883	88.3	36-166	WG601533
n-Nitrosodi-n-propylamine	mg/l	.01	0.00802	80.2	27-157	WG601533
n-Nitrosodimethylamine	mg/l	.01	0.00658	65.8	10-96	WG601533
n-Nitrosodiphenylamine	mg/l	.01	0.00892	89.2	41-168	WG601533
Naphthalene	mg/l	.01	0.00732	73.2	26-147	WG601533
Nitrobenzene	mg/l	.01	0.00747	74.7	22-154	WG601533
Pentachlorophenol	mg/l	.01	0.00568	56.8	10-128	WG601533
Phenanthrene	mg/l	.01	0.00932	93.2	46-163	WG601533
Phenol	mg/l	.01	0.00307	30.7	10-69	WG601533
Pyrene	mg/l	.01	0.0109	109.	45-176	WG601533
2,4,6-Tribromophenol				84.23	16-147	WG601533
2-Fluorobiphenyl				92.72	29-127	WG601533
2-Fluorophenol				37.92	10-75	WG601533
Nitrobenzene-d5				80.68	17-119	WG601533
Phenol-d5				28.85	10-63	WG601533
p-Terphenyl-d14				98.23	40-174	WG601533

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Level II

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July 16, 2012

Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch
		Known Val	Result	Result			
TPH (GC/FID) High Fraction	ppm	1.5	1.80		120.	50-150	WG601857
o-Terphenyl					109.9	50-150	WG601857
Mercury, Dissolved	mg/l	.003	0.00333		111.	85-115	WG602022
Barium, Dissolved	mg/l	1	1.05		105.	85-115	WG602246
Boron, Dissolved	mg/l	1	0.997		99.7	85-115	WG602246
Calcium, Dissolved	mg/l	10	10.5		105.	85-115	WG602246
Chromium, Dissolved	mg/l	1	1.05		105.	85-115	WG602246
Cobalt, Dissolved	mg/l	1	1.04		104.	85-115	WG602246
Copper, Dissolved	mg/l	1	1.00		100.	85-115	WG602246
Iron, Dissolved	mg/l	1	1.10		110.	85-115	WG602246
Magnesium, Dissolved	mg/l	10	10.7		107.	85-115	WG602246
Manganese, Dissolved	mg/l	1	1.06		106.	85-115	WG602246
Nickel, Dissolved	mg/l	1	1.04		104.	85-115	WG602246
Potassium, Dissolved	mg/l	10	9.81		98.1	85-115	WG602246
Silicon, Dissolved	mg/l	1	1.10		110.	85-115	WG602246
Sodium, Dissolved	mg/l	10	10.4		104.	85-115	WG602246
Strontium, Dissolved	mg/l	1	1.06		106.	85-115	WG602246
Vanadium, Dissolved	mg/l	1	1.03		103.	85-115	WG602246
Zinc, Dissolved	mg/l	1	1.03		103.	85-115	WG602246
Specific Conductance	umhos/cm	495	504.		102.	85-115	WG602349
Antimony, Dissolved	mg/l	.05	0.0531		106.	85-115	WG602266
Arsenic, Dissolved	mg/l	.05	0.0495		99.0	85-115	WG602266
Molybdenum, Dissolved	mg/l	.05	0.0513		103.	85-115	WG602266
Selenium, Dissolved	mg/l	.05	0.0464		92.8	85-115	WG602266

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.675	0.705	105.	70-130	4.41	25	WG601549
Ethene	mg/l	0.650	0.678	102.	70-130	4.17	25	WG601549
Methane	mg/l	0.345	0.361	102.	70-130	4.61	25	WG601549
1,1,1,2-Tetrachloroethane	mg/l	0.0273	0.0285	109.	77-128	4.32	20	WG601474
1,1,1-Trichloroethane	mg/l	0.0304	0.0292	122.	71-126	4.05	20	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0270	0.0281	108.	78-130	3.92	20	WG601474
1,1,2-Trichloroethane	mg/l	0.0274	0.0277	110.	81-121	0.790	20	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0322	0.0313	129.	53-143	2.89	20	WG601474
1,1-Dichloroethane	mg/l	0.0285	0.0279	114.	73-123	2.24	20	WG601474
1,1-Dichloroethene	mg/l	0.0301	0.0294	120.	54-134	2.20	20	WG601474
1,1-Dichloropropene	mg/l	0.0294	0.0278	118.	67-127	5.61	20	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0274	0.0265	110.	77-130	3.57	20	WG601474
1,2,3-Trichloropropane	mg/l	0.0300	0.0309	120.	68-130	2.71	20	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0273	0.0264	109.	77-126	3.64	20	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0276	0.0266	110.	76-127	3.84	20	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0293	114.	77-129	2.58	20	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0254	106.	55-142	3.89	20	WG601474
1,2-Dibromoethane	mg/l	0.0282	0.0289	113.	78-124	2.33	20	WG601474
1,2-Dichlorobenzene	mg/l	0.0262	0.0257	105.	82-121	2.03	20	WG601474
1,2-Dichloroethane	mg/l	0.0300	0.0288	120.	69-128	4.14	20	WG601474
1,2-Dichloropropane	mg/l	0.0283	0.0280	113.	77-121	0.890	20	WG601474

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Est. 1970

July 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
1,3,5-Trimethylbenzene	mg/l	0.0279	0.0293	112.		78-127	5.03	20	WG601474
1,3-Dichlorobenzene	mg/l	0.0264	0.0282	106.		77-127	6.49	20	WG601474
1,3-Dichloropropane	mg/l	0.0278	0.0281	111.		78-117	0.770	20	WG601474
1,4-Dichlorobenzene	mg/l	0.0265	0.0258	106.		79-117	2.64	20	WG601474
2,2-Dichloropropane	mg/l	0.0275	0.0262	110.		63-130	4.95	20	WG601474
2-Butanone (MEK)	mg/l	0.151	0.147	121.		58-144	2.69	20	WG601474
2-Chloroethyl vinyl ether	mg/l	0.131	0.114	105.		26-172	14.4	22	WG601474
2-Chlorotoluene	mg/l	0.0284	0.0279	114.		78-123	1.69	20	WG601474
4-Chlorotoluene	mg/l	0.0278	0.0286	111.		78-122	2.54	20	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.146	0.147	117.		58-147	0.750	20	WG601474
Acetone	mg/l	0.156	0.151	124.		49-153	3.12	21	WG601474
Acrolein	mg/l	0.125	0.126	100.		10-181	1.00	30	WG601474
Acrylonitrile	mg/l	0.143	0.144	115.		53-153	0.300	20	WG601474
Benzene	mg/l	0.0269	0.0259	108.		72-119	3.81	20	WG601474
Bromobenzene	mg/l	0.0275	0.0280	110.		76-121	1.64	20	WG601474
Bromodichloromethane	mg/l	0.0281	0.0274	112.		75-127	2.69	20	WG601474
Bromoform	mg/l	0.0270	0.0276	108.		61-136	2.22	20	WG601474
Bromomethane	mg/l	0.0332	0.0317	133.		42-172	4.55	20	WG601474
Carbon tetrachloride	mg/l	0.0308	0.0300	123.		63-129	2.57	20	WG601474
Chlorobenzene	mg/l	0.0269	0.0281	107.		78-123	4.33	20	WG601474
Chlorodibromomethane	mg/l	0.0273	0.0277	109.		73-128	1.51	20	WG601474
Chloroethane	mg/l	0.0305	0.0299	122.		52-164	1.71	20	WG601474
Chloroform	mg/l	0.0282	0.0278	113.		76-122	1.44	20	WG601474
Chloromethane	mg/l	0.0279	0.0276	112.		50-141	1.22	20	WG601474
cis-1,2-Dichloroethene	mg/l	0.0285	0.0283	114.		75-121	0.500	20	WG601474
cis-1,3-Dichloropropene	mg/l	0.0285	0.0276	114.		74-124	3.32	20	WG601474
Di-isopropyl ether	mg/l	0.0285	0.0277	114.		66-129	3.07	20	WG601474
Dibromomethane	mg/l	0.0292	0.0277	117.		77-124	5.35	20	WG601474
Dichlorodifluoromethane	mg/l	0.0337	0.0330	135.		33-173	1.91	20	WG601474
Ethylbenzene	mg/l	0.0272	0.0280	109.		77-124	2.83	20	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0280	0.0271	112.		71-134	3.39	20	WG601474
Isopropylbenzene	mg/l	0.0273	0.0286	109.		74-126	4.70	20	WG601474
Methyl tert-butyl ether	mg/l	0.0300	0.0303	120.		67-127	1.10	20	WG601474
Methylene Chloride	mg/l	0.0281	0.0278	112.		67-122	1.11	20	WG601474
n-Butylbenzene	mg/l	0.0278	0.0267	111.		74-130	3.90	20	WG601474
n-Propylbenzene	mg/l	0.0272	0.0279	109.		77-125	2.39	20	WG601474
Naphthalene	mg/l	0.0277	0.0268	111.		70-134	3.29	20	WG601474
p-Isopropyltoluene	mg/l	0.0280	0.0298	112.		77-132	5.96	20	WG601474
sec-Butylbenzene	mg/l	0.0279	0.0292	111.		77-130	4.72	20	WG601474
Styrene	mg/l	0.0262	0.0268	105.		69-145	2.28	20	WG601474
tert-Butylbenzene	mg/l	0.0282	0.0295	113.		76-131	4.46	20	WG601474
Tetrachloroethene	mg/l	0.0264	0.0272	106.		69-131	2.89	20	WG601474
Toluene	mg/l	0.0278	0.0273	111.		75-114	1.56	20	WG601474
trans-1,2-Dichloroethene	mg/l	0.0288	0.0284	115.		63-127	1.43	20	WG601474
trans-1,3-Dichloropropene	mg/l	0.0290	0.0272	116.		69-124	6.55	20	WG601474
Trichloroethene	mg/l	0.0281	0.0272	112.		69-131	3.07	20	WG601474
Trichlorofluoromethane	mg/l	0.0137	0.0140	55.0		53-161	2.28	20	WG601474
Vinyl chloride	mg/l	0.0290	0.0282	116.		55-142	2.93	20	WG601474
Xylenes, Total	mg/l	0.0814	0.0849	108.		77-123	4.14	20	WG601474
4-Bromofluorobenzene				104.9		82-120			WG601474
Dibromofluoromethane				103.3		82-126			WG601474
Toluene-d8				104.7		92-112			WG601474
Bromide	mg/l	40.6	41.3	102.		90-110	1.71	20	WG601502
Chloride	mg/l	40.2	40.0	100.		90-110	0.499	20	WG601502
Fluoride	mg/l	8.15	8.12	102.		90-110	0.369	20	WG601502

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.18	6.37	112.		70-124	3.01	20	WG601602
a,a,a-Trifluorotoluene(FID)				108.6		62-128			WG601602
pH	su	5.70	5.71	100.		98-101	0.175	20	WG601565
Sulfate	mg/l	39.7	39.7	99.0		90-110	0	20	WG601787
Alkalinity	mg/l	97.4	95.7	97.0		85-115	1.76	20	WG601754
TOC (Total Organic Carbon)	mg/l	76.5	77.2	102.		85-115	1.01	20	WG601789
Dissolved Solids	mg/l	8670	8730	98.0		85-115	0.690	20	WG601740
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00564	53.0		18-130	6.06	32	WG601533
2,4,6-Trichlorophenol	mg/l	0.00713	0.00700	71.0		12-147	1.80	40	WG601533
2,4-Dichlorophenol	mg/l	0.00708	0.00748	71.0		10-157	5.50	40	WG601533
2,4-Dimethylphenol	mg/l	0.00527	0.00799	53.0		19-160	41.1*	40	WG601533
2,4-Dinitrophenol	mg/l	0.00704	0.00682	70.0		10-135	3.24	40	WG601533
2,4-Dinitrotoluene	mg/l	0.00641	0.00661	64.0		30-168	3.10	32	WG601533
2,6-Dinitrotoluene	mg/l	0.00671	0.00666	67.0		32-163	0.674	30	WG601533
2-Chloronaphthalene	mg/l	0.00714	0.00797	71.0		29-149	11.0	34	WG601533
2-Chlorophenol	mg/l	0.00611	0.00598	61.0		16-129	2.15	40	WG601533
2-Nitrophenol	mg/l	0.00724	0.00714	72.0		14-158	1.40	40	WG601533
3,3-Dichlorobenzidine	mg/l	0.00723	0.00746	72.0		42-150	3.12	29	WG601533
4,6-Dinitro-2-methylphenol	mg/l	0.00836	0.00750	84.0		10-164	10.9	40	WG601533
4-Bromophenyl-phenylether	mg/l	0.00799	0.00874	80.0		40-166	8.98	36	WG601533
4-Chloro-3-methylphenol	mg/l	0.00740	0.00762	74.0		14-158	2.95	40	WG601533
4-Chlorophenyl-phenylether	mg/l	0.00796	0.00868	80.0		39-155	8.66	33	WG601533
4-Nitrophenol	mg/l	0.00121	0.00100	12.0		10-61	18.7	40	WG601533
Acenaphthene	mg/l	0.00838	0.00885	84.0		37-159	5.40	30	WG601533
Acenaphthylene	mg/l	0.00737	0.00788	74.0		34-162	6.66	31	WG601533
Anthracene	mg/l	0.00840	0.00871	84.0		48-167	3.66	26	WG601533
Benzidine	mg/l	0.00206	0.00254	20.0		10-86	20.9	40	WG601533
Benzo(a)anthracene	mg/l	0.00877	0.00921	88.0		46-167	4.91	29	WG601533
Benzo(a)pyrene	mg/l	0.00821	0.00878	82.0		39-167	6.78	29	WG601533
Benzo(b)fluoranthene	mg/l	0.00844	0.00891	84.0		39-173	5.35	32	WG601533
Benzo(g,h,i)perylene	mg/l	0.00856	0.00891	86.0		42-181	4.04	30	WG601533
Benzo(k)fluoranthene	mg/l	0.00898	0.00955	90.0		42-178	6.14	33	WG601533
Benzylbutyl phthalate	mg/l	0.00969	0.0101	97.0		10-178	4.49	40	WG601533
Bis(2-chlorethoxy)methane	mg/l	0.00810	0.00863	81.0		34-155	6.26	31	WG601533
Bis(2-chloroethyl)ether	mg/l	0.00673	0.00693	67.0		22-149	2.89	38	WG601533
Bis(2-chloroisopropyl)ether	mg/l	0.00679	0.00720	68.0		26-149	5.88	34	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	0.0107	0.0116	107.		42-191	8.39	33	WG601533
Chrysene	mg/l	0.00950	0.00966	95.0		46-170	1.60	30	WG601533
Di-n-butyl phthalate	mg/l	0.00974	0.0100	97.0		33-175	2.99	39	WG601533
Di-n-octyl phthalate	mg/l	0.00923	0.00937	92.0		40-170	1.56	28	WG601533
Dibenz(a,h)anthracene	mg/l	0.00841	0.00881	84.0		43-187	4.61	31	WG601533
Diethyl phthalate	mg/l	0.0103	0.0103	103.		10-182	0.456	35	WG601533
Dimethyl phthalate	mg/l	0.00982	0.00998	98.0		10-165	1.60	37	WG601533
Fluoranthene	mg/l	0.00880	0.00930	88.0		46-171	5.61	37	WG601533
Fluorene	mg/l	0.00839	0.00890	84.0		39-163	5.90	36	WG601533
Hexachloro-1,3-butadiene	mg/l	0.00504	0.00560	50.0		18-136	10.5	30	WG601533
Hexachlorobenzene	mg/l	0.00814	0.00859	81.0		38-163	5.37	35	WG601533

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Tax I.D. 62-0814289

Est. 1970

July 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hexachlorocyclopentadiene	mg/l	0.00346	0.00412	35.0	10-142	17.4	40	WG601533
Hexachloroethane	mg/l	0.00455	0.00459	45.0	10-130	0.935	39	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	0.00829	0.00879	83.0	42-184	5.95	32	WG601533
Isophorone	mg/l	0.00894	0.00883	89.0	36-166	1.30	35	WG601533
n-Nitrosodi-n-propylamine	mg/l	0.00788	0.00802	79.0	27-157	1.66	31	WG601533
n-Nitrosodimethylamine	mg/l	0.00748	0.00658	75.0	10-96	12.9	36	WG601533
n-Nitrosodiphenylamine	mg/l	0.00862	0.00892	86.0	41-168	3.35	37	WG601533
Naphthalene	mg/l	0.00689	0.00732	69.0	26-147	6.13	31	WG601533
Nitrobenzene	mg/l	0.00756	0.00747	76.0	22-154	1.23	37	WG601533
Pentachlorophenol	mg/l	0.00498	0.00568	50.0	10-128	13.1	40	WG601533
Phenanthrene	mg/l	0.00893	0.00932	89.0	46-163	4.24	29	WG601533
Phenol	mg/l	0.00276	0.00307	28.0	10-69	10.4	40	WG601533
Pyrene	mg/l	0.0103	0.0109	103.	45-176	5.30	28	WG601533
2,4,6-Tribromophenol				82.16	16-147			WG601533
2-Fluorobiphenyl				84.65	29-127			WG601533
2-Fluorophenol				38.24	10-75			WG601533
Nitrobenzene-d5				78.51	17-119			WG601533
Phenol-d5				26.91	10-63			WG601533
p-Terphenyl-d14				95.38	40-174			WG601533
TPH (GC/FID) High Fraction	ppm	1.80	1.80	120.	50-150	0	20	WG601857
o-Terphenyl				107.1	50-150			WG601857
Barium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Boron,Dissolved	mg/l	1.02	0.997	102.	85-115	2.28	20	WG602246
Calcium,Dissolved	mg/l	10.8	10.5	108.	85-115	2.82	20	WG602246
Chromium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Cobalt,Dissolved	mg/l	1.06	1.04	106.	85-115	1.90	20	WG602246
Copper,Dissolved	mg/l	1.03	1.00	103.	85-115	2.96	20	WG602246
Iron,Dissolved	mg/l	1.14	1.10	114.	85-115	3.57	20	WG602246
Magnesium,Dissolved	mg/l	11.0	10.7	110.	85-115	2.76	20	WG602246
Manganese,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Nickel,Dissolved	mg/l	1.07	1.04	107.	85-115	2.84	20	WG602246
Potassium,Dissolved	mg/l	10.3	9.81	103.	85-115	4.87	20	WG602246
Silicon,Dissolved	mg/l	1.13	1.10	113.	85-115	2.69	20	WG602246
Sodium,Dissolved	mg/l	10.7	10.4	107.	85-115	2.84	20	WG602246
Strontium,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Vanadium,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Zinc,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Specific Conductance	umhos/	504.	504.	102.	85-115	0	20	WG602349

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0283	0	.025	113.	71-130	L83526-03	WG601474
1,1,1-Trichloroethane	mg/l	0.0338	0	.025	135.	58-137	L83526-03	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0278	0	.025	111.	64-149	L83526-03	WG601474
1,1,2-Trichloroethane	mg/l	0.0267	0	.025	107.	73-128	L83526-03	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0376	0	.025	150.	36-159	L83526-03	WG601474
1,1-Dichloroethane	mg/l	0.0298	0	.025	119.	58-133	L83526-03	WG601474
1,1-Dichloroethene	mg/l	0.0335	0	.025	134.	32-152	L83526-03	WG601474
1,1-Dichloropropene	mg/l	0.0325	0	.025	130.	50-140	L83526-03	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0270	0	.025	108.	68-135	L83526-03	WG601474
1,2,3-Trichloropropane	mg/l	0.0297	0	.025	119.	74-137	L83526-03	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0283	0	.025	113.	67-133	L83526-03	WG601474

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4-Trichlorobenzene	mg/l	0.0280	0	.025	112.	67-133	L83526-03	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0299	0	.025	119.	62-141	L83526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0250	0	.025	99.8	55-148	L83526-03	WG601474
1,2-Dibromoethane	mg/l	0.0278	0	.025	111.	71-129	L83526-03	WG601474
1,2-Dichlorobenzene	mg/l	0.0266	0	.025	106.	75-125	L83526-03	WG601474
1,2-Dichloroethane	mg/l	0.0285	0	.025	114.	59-135	L83526-03	WG601474
1,2-Dichloropropane	mg/l	0.0277	0	.025	111.	68-126	L83526-03	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0307	0	.025	123.	67-136	L83526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0284	0	.025	114.	69-131	L83526-03	WG601474
1,3-Dichloropropane	mg/l	0.0275	0	.025	110.	70-122	L83526-03	WG601474
1,4-Dichlorobenzene	mg/l	0.0276	0	.025	110.	70-123	L83526-03	WG601474
2,2-Dichloropropane	mg/l	0.0314	0	.025	126.	51-141	L83526-03	WG601474
2-Butanone (MEK)	mg/l	0.110	0	.125	88.0	51-149	L83526-03	WG601474
2-Chloroethyl vinyl ether	mg/l	0.0426	0	.125	34.1	10-161	L83526-03	WG601474
2-Chlorotoluene	mg/l	0.0284	0	.025	114.	65-133	L83526-03	WG601474
4-Chlorotoluene	mg/l	0.0297	0	.025	119.	67-129	L83526-03	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.140	0	.125	112.	53-154	L83526-03	WG601474
Acetone	mg/l	0.0871	0	.125	69.6	34-146	L83526-03	WG601474
Acrolein	mg/l	0.107	0	.125	85.4	10-189	L83526-03	WG601474
Acrylonitrile	mg/l	0.146	0	.125	117.	49-162	L83526-03	WG601474
Benzene	mg/l	0.0282	0	.025	113.	51-134	L83526-03	WG601474
Bromobenzene	mg/l	0.0282	0	.025	113.	64-130	L83526-03	WG601474
Bromodichloromethane	mg/l	0.0277	0	.025	111.	67-132	L83526-03	WG601474
Bromoform	mg/l	0.0261	0	.025	104.	59-137	L83526-03	WG601474
Bromomethane	mg/l	0.0327	0	.025	131.	23-177	L83526-03	WG601474
Carbon tetrachloride	mg/l	0.0350	0	.025	140.	49-140	L83526-03	WG601474
Chlorobenzene	mg/l	0.0281	0	.025	113.	69-126	L83526-03	WG601474
Chlorodibromomethane	mg/l	0.0270	0	.025	108.	68-130	L83526-03	WG601474
Chloroethane	mg/l	0.0332	0	.025	133.	32-177	L83526-03	WG601474
Chloroform	mg/l	0.0290	0	.025	116.	64-130	L83526-03	WG601474
Chloromethane	mg/l	0.0291	0	.025	116.	27-155	L83526-03	WG601474
cis-1,2-Dichloroethene	mg/l	0.0290	0	.025	116.	54-137	L83526-03	WG601474
cis-1,3-Dichloropropene	mg/l	0.0274	0	.025	109.	63-127	L83526-03	WG601474
Di-isopropyl ether	mg/l	0.0288	0	.025	115.	58-133	L83526-03	WG601474
Dibromomethane	mg/l	0.0271	0	.025	108.	68-131	L83526-03	WG601474
Dichlorodifluoromethane	mg/l	0.0382	0	.025	153.	16-188	L83526-03	WG601474
Ethylbenzene	mg/l	0.0297	0	.025	119.	64-135	L83526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0298	0	.025	119.	64-140	L83526-03	WG601474
Isopropylbenzene	mg/l	0.0305	0	.025	122.	62-134	L83526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0297	0	.025	119.	55-136	L83526-03	WG601474
Methylene Chloride	mg/l	0.0284	0	.025	114.	52-130	L83526-03	WG601474
n-Butylbenzene	mg/l	0.0305	0	.025	122.	62-142	L83526-03	WG601474
n-Propylbenzene	mg/l	0.0307	0	.025	123.	62-137	L83526-03	WG601474
Naphthalene	mg/l	0.0268	0	.025	107.	65-140	L83526-03	WG601474
p-Isopropyltoluene	mg/l	0.0320	0	.025	128.	64-142	L83526-03	WG601474
sec-Butylbenzene	mg/l	0.0316	0	.025	126.	67-139	L83526-03	WG601474
Styrene	mg/l	0.0271	0	.025	108.	58-152	L83526-03	WG601474
tert-Butylbenzene	mg/l	0.0310	0	.025	124.	66-139	L83526-03	WG601474
Tetrachloroethene	mg/l	0.0292	0	.025	117.	56-139	L83526-03	WG601474
Toluene	mg/l	0.0287	0	.025	115.	61-126	L83526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0314	0	.025	126.	45-137	L83526-03	WG601474
trans-1,3-Dichloropropene	mg/l	0.0268	0	.025	107.	59-130	L83526-03	WG601474
Trichloroethene	mg/l	0.0290	0	.025	116.	40-155	L83526-03	WG601474
Trichlorofluoromethane	mg/l	0.0182	0	.025	72.8	35-177	L83526-03	WG601474
Vinyl chloride	mg/l	0.0318	0	.025	127.	32-159	L83526-03	WG601474
Xylenes, Total	mg/l	0.0886	0	.075	118.	64-133	L83526-03	WG601474
4-Bromofluorobenzene					109.0	82-120		WG601474
Dibromofluoromethane					104.0	82-126		WG601474
Toluene-d8					102.9	92-112		WG601474

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Fluoride	mg/l	5.30	0	5	106.	80-120	L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.23	0	5.5	113.*	55-109	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)					108.4	62-128		WG601602
Sulfate	mg/l	213.	120.	50	93.0	80-120	L583595-01	WG601787
Alkalinity	mg/l	345.	280.	100	65.0*	80-120	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	55.3	3.40	50	104.	80-120	L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00260	0	.003	86.7	70-130	L583595-01	WG602022
Antimony,Dissolved	mg/l	0.0587	0.00180	.05	114.	75-125	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0960	0.0520	.05	88.0	75-125	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0598	0.0121	.05	95.4	75-125	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.88	1.90	.01	0*	75-125	L584127-02	WG602266

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0264		2.64*	71-130	*	20		WG601474
1,1,1-Trichloroethane	mg/l	0.0326		3.26*	58-137	*	20		WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0274		2.74*	64-149	*	20		WG601474
1,1,2-Trichloroethane	mg/l	0.0267		2.67*	73-128	*	20		WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0362		3.62*	36-159	*	21		WG601474
1,1-Dichloroethane	mg/l	0.0293		2.93*	58-133	*	20		WG601474
1,1-Dichloroethene	mg/l	0.0322		3.22*	32-152	*	20		WG601474
1,1-Dichloropropene	mg/l	0.0313		3.13*	50-140	*	20		WG601474
1,2,3-Trichlorobenzene	mg/l	0.0268		2.68*	68-135	*	20		WG601474
1,2,3-Trichloropropane	mg/l	0.0292		2.92*	74-137	*	20		WG601474
1,2,3-Trimethylbenzene	mg/l	0.0268		2.68*	67-133	*	20		WG601474
1,2,4-Trichlorobenzene	mg/l	0.0275		2.75*	67-133	*	20		WG601474
1,2,4-Trimethylbenzene	mg/l	0.0287	0.0299	115.	62-141	3.84	20	L83526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0270		2.70*	55-148	*	22		WG601474
1,2-Dibromoethane	mg/l	0.0273		2.73*	71-129	*	20		WG601474
1,2-Dichlorobenzene	mg/l	0.0260		2.60*	75-125	*	20		WG601474
1,2-Dichloroethane	mg/l	0.0290		2.90*	59-135	*	20		WG601474
1,2-Dichloropropane	mg/l	0.0284		2.84*	68-126	*	20		WG601474
1,3,5-Trimethylbenzene	mg/l	0.0286	0.0307	114.	67-136	6.84	20	L83526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0267		2.67*	69-131	*	20		WG601474
1,3-Dichloropropane	mg/l	0.0273		2.72*	70-122	*	20		WG601474
1,4-Dichlorobenzene	mg/l	0.0258		2.58*	70-123	*	20		WG601474
2,2-Dichloropropane	mg/l	0.0304		3.04*	51-141	*	20		WG601474
2-Butanone (MEK)	mg/l	0.118		11.8*	51-149	*	22		WG601474
2-Chloroethyl vinyl ether	mg/l	0.00592		0.592*	10-161	*	40		WG601474
2-Chlorotoluene	mg/l	0.0282		2.82*	65-133	*	20		WG601474
4-Chlorotoluene	mg/l	0.0276		2.76*	67-129	*	20		WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.148		14.8*	53-154	*	21		WG601474
Acetone	mg/l	0.0929		9.29*	34-146	*	22		WG601474
Acrolein	mg/l	0.103		10.3	10-189	*	30		WG601474
Acrylonitrile	mg/l	0.151		15.0*	49-162	*	20		WG601474
Benzene	mg/l	0.0273	0.0282	109.	51-134	3.17	20	L83526-03	WG601474

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Bromobenzene	mg/l	0.0268		2.68*	64-130	*	20			WG601474
Bromodichloromethane	mg/l	0.0277		2.77*	67-132	*	20			WG601474
Bromoform	mg/l	0.0256		2.56*	59-137	*	20			WG601474
Bromomethane	mg/l	0.0336		3.36*	23-177	*	21			WG601474
Carbon tetrachloride	mg/l	0.0337		3.37*	49-140	*	20			WG601474
Chlorobenzene	mg/l	0.0262		2.62*	69-126	*	20			WG601474
Chlorodibromomethane	mg/l	0.0266		2.66*	68-130	*	20			WG601474
Chloroethane	mg/l	0.0326		3.26*	32-177	*	21			WG601474
Chloroform	mg/l	0.0288		2.88*	64-130	*	20			WG601474
Chloromethane	mg/l	0.0291		2.91*	27-155	*	20			WG601474
cis-1,2-Dichloroethene	mg/l	0.0283		2.83*	54-137	*	20			WG601474
cis-1,3-Dichloropropene	mg/l	0.0275		2.75*	63-127	*	20			WG601474
Di-isopropyl ether	mg/l	0.0292		2.92*	58-133	*	20			WG601474
Dibromomethane	mg/l	0.0281		2.81*	68-131	*	20			WG601474
Dichlorodifluoromethane	mg/l	0.0367		3.67*	16-188	*	22			WG601474
Ethylbenzene	mg/l	0.0273	0.0297	109.	64-135	8.20	20		L83526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0294		2.94*	64-140	*	20			WG601474
Isopropylbenzene	mg/l	0.0284	0.0305	114.	62-134	7.20	20		L83526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0301	0.0297	120.	55-136	1.37	20		L83526-03	WG601474
Methylene Chloride	mg/l	0.0277		2.77*	52-130	*	20			WG601474
n-Butylbenzene	mg/l	0.0302		3.02*	62-142	*	20			WG601474
n-Propylbenzene	mg/l	0.0289		2.89*	62-137	*	20			WG601474
Naphthalene	mg/l	0.0275	0.0268	110.	65-140	2.73	20		L83526-03	WG601474
p-Isopropyltoluene	mg/l	0.0302		3.02*	64-142	*	20			WG601474
sec-Butylbenzene	mg/l	0.0293		2.93*	67-139	*	20			WG601474
Styrene	mg/l	0.0264		2.64*	58-152	*	20			WG601474
tert-Butylbenzene	mg/l	0.0290		2.90*	66-139	*	20			WG601474
Tetrachloroethene	mg/l	0.0278		2.78*	56-139	*	20			WG601474
Toluene	mg/l	0.0283	0.0287	113.	61-126	1.34	20		L83526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0296		2.96*	45-137	*	20			WG601474
trans-1,3-Dichloropropene	mg/l	0.0279		2.79*	59-130	*	20			WG601474
Trichloroethene	mg/l	0.0285		2.85*	40-155	*	20			WG601474
Trichlorofluoromethane	mg/l	0.0364		3.64*	35-177	*	23			WG601474
Vinyl chloride	mg/l	0.0316		3.16*	32-159	*	21			WG601474
Xylenes, Total	mg/l	0.0832	0.0886	111.	64-133	6.28	20		L83526-03	WG601474
4-Bromofluorobenzene				106.3	82-120					WG601474
Dibromofluoromethane				105.4	82-126					WG601474
Toluene-d8				104.2	92-112					WG601474
Fluoride	mg/l	5.14	5.30	103.	80-120	3.07	20		L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.19	6.23	112.*	55-109	0.680	20		L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)				108.7	62-128					WG601602
Sulfate	mg/l	209.	213.	89.0	80-120	1.90	20		L583595-01	WG601787
Alkalinity	mg/l	346.	345.	66.0*	80-120	0.289	20		L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	53.3	55.3	99.9	80-120	3.63	20		L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00259	0.00260	86.3	70-130	0.385	30		L583595-01	WG602022

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583596

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

July 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Antimony,Dissolved	mg/l	0.0634	0.0587	123.	75-125	7.70	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.104	0.0960	104.	75-125	8.00	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0642	0.0598	104.	75-125	7.10	20	L584127-02	WG602266
Selenium,Dissolved	mg/l	2.03	1.88	260.*	75-125	7.67	20	L584127-02	WG602266

Batch number /Run number / Sample number cross reference

WG601549: R2243273: L583596-01  
WG601474: R2243555: L583596-01  
WG601502: R2244754: L583596-01  
WG601602: R2245433: L583596-01  
WG601565: R2246534: L583596-01  
WG601787: R2246933: L583596-01  
WG601533: R2247133: L583596-01  
WG601754: R2247593: L583596-01  
WG601755: R2247613: L583596-01  
WG601756: R2247633: L583596-01  
WG601789: R2248876: L583596-01  
WG601740: R2249833: L583596-01  
WG601857: R2250554: L583596-01  
WG602022: R2253155: L583596-01  
WG602246: R2253894: L583596-01  
WG602349: R2254375: L583596-01  
WG602266: R2255453: L583596-01  
WG602746: R2256917: L583596-01

\* \* 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.'



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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.



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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Friday July 20, 2012

Report Number: L583595

Samples Received: 07/06/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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

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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 20, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

ESC Sample # : L583595-01

Sample ID : SCHIIR-070512

Site ID : F12E

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:30

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/07/12	1
Chloride	22.	1.0	mg/l	9056	07/07/12	1
Fluoride	1.9	0.10	mg/l	9056	07/07/12	1
Sulfate	120	10.	mg/l	9056	07/09/12	2
Alkalinity	640	100	mg/l	2320B	07/10/12	5
Alkalinity,Bicarbonate	580	20.	mg/l	2320B	07/10/12	1
Alkalinity,Carbonate	52.	20.	mg/l	2320B	07/10/12	1
Methane	0.019	0.010	mg/l	RSK175	07/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/07/12	1
pH	8.7		su	9040C	07/09/12	1
Specific Conductance	1400		umhos/cm	9050A	07/13/12	1
TOC (Total Organic Carbon)	9.3	1.0	mg/l	9060A	07/10/12	1
Dissolved Solids	910	10.	mg/l	2540C	07/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/13/12	1
Arsenic,Dissolved	0.0027	0.0010	mg/l	200.8	07/13/12	1
Molybdenum,Dissolved	0.0078	0.0020	mg/l	200.8	07/13/12	1
Selenium,Dissolved	0.0088	0.0010	mg/l	200.8	07/13/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/12/12	1
Barium,Dissolved	0.098	0.0050	mg/l	200.7	07/13/12	1
Boron,Dissolved	0.35	0.20	mg/l	200.7	07/13/12	1
Calcium,Dissolved	38.	0.50	mg/l	200.7	07/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/13/12	1
Lithium,Dissolved	0.054	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	42.	0.10	mg/l	200.7	07/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/13/12	1
Potassium,Dissolved	1.6	0.50	mg/l	200.7	07/13/12	1
Silicon,Dissolved	9.0	0.20	mg/l	200.7	07/13/12	1
Sodium,Dissolved	260	0.50	mg/l	200.7	07/13/12	1
Strontium,Dissolved	1.3	0.010	mg/l	200.7	07/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583595-01 (PH) - 8.7@17.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 20, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHIIR-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:30

ESC Sample # : L583595-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	BDL	0.030	mg/l	200.7	07/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8015D/GRO	07/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583595-01 (PH) - 8.7@17.9c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 20, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHIIR-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:30

ESC Sample # : L583595-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/06/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	07/06/12	1
Dibromofluoromethane	108.		% Rec.	8260B	07/06/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	07/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/12/12	1
Surrogate recovery(%)						
o-Terphenyl	96.3		% Rec.	3511/8015	07/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583595-01 (PH) - 8.7@17.9c



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Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 20, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHIIR-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:30

ESC Sample # : L583595-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L583595-01 (PH) - 8.7@17.9c



12065 Lebanon Rd.  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 20, 2012

Date Received : July 06, 2012  
Description : F12E Polyline Release

Sample ID : SCHIIR-070512

Collected By : Aaron Stacy  
Collection Date : 07/05/12 12:30

ESC Sample # : L583595-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/10/12	1
Surrogate Recovery						
2-Fluorophenol	40.4		% Rec.	8270 C	07/10/12	1
Phenol-d5	34.1		% Rec.	8270 C	07/10/12	1
Nitrobenzene-d5	80.0		% Rec.	8270 C	07/10/12	1
2-Fluorobiphenyl	88.3		% Rec.	8270 C	07/10/12	1
2,4,6-Tribromophenol	53.7		% Rec.	8270 C	07/10/12	1
p-Terphenyl-d14	92.4		% Rec.	8270 C	07/10/12	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: 07/20/12 13:44 Printed: 07/20/12 13:45  
L583595-01 (PH) - 8.7@17.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L583595-01	WG601565	SAMP	pH	R2246534	T8
	WG601533	SAMP	2,4-Dimethylphenol	R2247133	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
07/20/12 at 13:45:06

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L583595-01 Account: ENCRCO Received: 07/06/12 09:00 Due Date: 07/18/12 00:00 RPT Date: 07/20/12 13:44  
Removed Nitrate and Nitrite per AS. jw 7/16



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Tax I.D. 62-0814289

Est. 1970

July 20, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Ethane	< .013	mg/l			WG601549	07/07/12 13:38
Ethene	< .013	mg/l			WG601549	07/07/12 13:38
Methane	< .01	mg/l			WG601549	07/07/12 13:38
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,1-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
1,1-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,2,3-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2,4-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG601474	07/06/12 20:10
1,2-Dibromoethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloroethane	< .001	mg/l			WG601474	07/06/12 20:10
1,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,3,5-Trimethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
1,3-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
1,4-Dichlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
2,2-Dichloropropane	< .001	mg/l			WG601474	07/06/12 20:10
2-Butanone (MEK)	< .01	mg/l			WG601474	07/06/12 20:10
2-Chloroethyl vinyl ether	< .05	mg/l			WG601474	07/06/12 20:10
2-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Chlorotoluene	< .001	mg/l			WG601474	07/06/12 20:10
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG601474	07/06/12 20:10
Acetone	< .05	mg/l			WG601474	07/06/12 20:10
Acrolein	< .025	mg/l			WG601474	07/06/12 20:10
Acrylonitrile	< .01	mg/l			WG601474	07/06/12 20:10
Benzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Bromodichloromethane	< .001	mg/l			WG601474	07/06/12 20:10
Bromoform	< .001	mg/l			WG601474	07/06/12 20:10
Bromomethane	< .005	mg/l			WG601474	07/06/12 20:10
Carbon tetrachloride	< .001	mg/l			WG601474	07/06/12 20:10
Chlorobenzene	< .001	mg/l			WG601474	07/06/12 20:10
Chlorodibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Chloroethane	< .005	mg/l			WG601474	07/06/12 20:10
Chloroform	< .005	mg/l			WG601474	07/06/12 20:10
Chloromethane	< .0025	mg/l			WG601474	07/06/12 20:10
cis-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
cis-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Di-isopropyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Dibromomethane	< .001	mg/l			WG601474	07/06/12 20:10
Dichlorodifluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Ethylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Hexachloro-1,3-butadiene	< .001	mg/l			WG601474	07/06/12 20:10
Isopropylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Methyl tert-butyl ether	< .001	mg/l			WG601474	07/06/12 20:10
Methylene Chloride	< .005	mg/l			WG601474	07/06/12 20:10
n-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
n-Propylbenzene	< .001	mg/l			WG601474	07/06/12 20:10

\* Performance of this Analyte is outside of established criteria.

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



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 20, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Naphthalene	< .005	mg/l			WG601474	07/06/12 20:10
p-Isopropyltoluene	< .001	mg/l			WG601474	07/06/12 20:10
sec-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Styrene	< .001	mg/l			WG601474	07/06/12 20:10
tert-Butylbenzene	< .001	mg/l			WG601474	07/06/12 20:10
Tetrachloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Toluene	< .005	mg/l			WG601474	07/06/12 20:10
trans-1,2-Dichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
trans-1,3-Dichloropropene	< .001	mg/l			WG601474	07/06/12 20:10
Trichloroethene	< .001	mg/l			WG601474	07/06/12 20:10
Trichlorofluoromethane	< .005	mg/l			WG601474	07/06/12 20:10
Vinyl chloride	< .001	mg/l			WG601474	07/06/12 20:10
Xylenes, Total	< .003	mg/l			WG601474	07/06/12 20:10
4-Bromofluorobenzene		% Rec.	109.6	82-120	WG601474	07/06/12 20:10
Dibromofluoromethane		% Rec.	106.0	82-126	WG601474	07/06/12 20:10
Toluene-d8		% Rec.	103.7	92-112	WG601474	07/06/12 20:10
Bromide	< 1	mg/l			WG601502	07/07/12 06:56
Chloride	< 1	mg/l			WG601502	07/07/12 06:56
Fluoride	< .1	mg/l			WG601502	07/07/12 06:56
TPH (GC/FID) Low Fraction	< .1	mg/l			WG601602	07/08/12 17:47
a,a,a-Trifluorotoluene(FID)		% Rec.	100.0	62-128	WG601602	07/08/12 17:47
pH	4.28	su			WG601565	07/09/12 14:31
Sulfate	< 5	mg/l			WG601787	07/09/12 15:40
Alkalinity	< 20	mg/l			WG601754	07/10/12 07:30
TOC (Total Organic Carbon)	< 1	mg/l			WG601789	07/10/12 15:33
Dissolved Solids	< 10	mg/l			WG601740	07/11/12 14:44
1,2,4-Trichlorobenzene	< .01	mg/l			WG601533	07/10/12 19:34
2,4,6-Trichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dichlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dimethylphenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
2,4-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2,6-Dinitrotoluene	< .01	mg/l			WG601533	07/10/12 19:34
2-Chloronaphthalene	< .001	mg/l			WG601533	07/10/12 19:34
2-Chlorophenol	< .01	mg/l			WG601533	07/10/12 19:34
2-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
3,3-Dichlorobenzidine	< .01	mg/l			WG601533	07/10/12 19:34
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Bromophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Chloro-3-methylphenol	< .01	mg/l			WG601533	07/10/12 19:34
4-Chlorophenyl-phenylether	< .01	mg/l			WG601533	07/10/12 19:34
4-Nitrophenol	< .01	mg/l			WG601533	07/10/12 19:34
Acenaphthene	< .001	mg/l			WG601533	07/10/12 19:34

\* Performance of this Analyte is outside of established criteria.

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





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Est. 1970

July 20, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthylene	< .001	mg/l			WG601533	07/10/12 19:34
Anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzidine	< .01	mg/l			WG601533	07/10/12 19:34
Benzo(a)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(a)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(b)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(g,h,i)perylene	< .001	mg/l			WG601533	07/10/12 19:34
Benzo(k)fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Benzylbutyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Bis(2-chlorethoxy)methane	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroethyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG601533	07/10/12 19:34
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Chrysene	< .001	mg/l			WG601533	07/10/12 19:34
Di-n-butyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Di-n-octyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dibenz(a,h)anthracene	< .001	mg/l			WG601533	07/10/12 19:34
Diethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Dimethyl phthalate	< .003	mg/l			WG601533	07/10/12 19:34
Fluoranthene	< .001	mg/l			WG601533	07/10/12 19:34
Fluorene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachloro-1,3-butadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachlorobenzene	< .001	mg/l			WG601533	07/10/12 19:34
Hexachlorocyclopentadiene	< .01	mg/l			WG601533	07/10/12 19:34
Hexachloroethane	< .01	mg/l			WG601533	07/10/12 19:34
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG601533	07/10/12 19:34
Isophorone	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodi-n-propylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodimethylamine	< .01	mg/l			WG601533	07/10/12 19:34
n-Nitrosodiphenylamine	< .01	mg/l			WG601533	07/10/12 19:34
Naphthalene	< .001	mg/l			WG601533	07/10/12 19:34
Nitrobenzene	< .01	mg/l			WG601533	07/10/12 19:34
Pentachlorophenol	< .001	mg/l			WG601533	07/10/12 19:34
Phenanthrene	< .001	mg/l			WG601533	07/10/12 19:34
Phenol	< .01	mg/l			WG601533	07/10/12 19:34
Pyrene	< .001	mg/l			WG601533	07/10/12 19:34
2,4,6-Tribromophenol		% Rec.	79.49	16-147	WG601533	07/10/12 19:34
2-Fluorobiphenyl		% Rec.	89.38	29-127	WG601533	07/10/12 19:34
2-Fluorophenol		% Rec.	45.06	10-75	WG601533	07/10/12 19:34
Nitrobenzene-d5		% Rec.	82.43	17-119	WG601533	07/10/12 19:34
Phenol-d5		% Rec.	32.67	10-63	WG601533	07/10/12 19:34
p-Terphenyl-d14		% Rec.	93.01	40-174	WG601533	07/10/12 19:34
TPH (GC/FID) High Fraction	< .1	ppm			WG601857	07/11/12 22:42
o-Terphenyl		% Rec.	105.6	50-150	WG601857	07/11/12 22:42
Mercury,Dissolved	< .0002	mg/l			WG602022	07/12/12 22:10
Barium,Dissolved	< .005	mg/l			WG602246	07/13/12 11:07
Boron,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Calcium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Chromium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Cobalt,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Copper,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Iron,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07
Magnesium,Dissolved	< .1	mg/l			WG602246	07/13/12 11:07

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L583595

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July 20, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Manganese,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Nickel,Dissolved	< .02	mg/l			WG602246	07/13/12 11:07
Potassium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Silicon,Dissolved	< .2	mg/l			WG602246	07/13/12 11:07
Sodium,Dissolved	< .5	mg/l			WG602246	07/13/12 11:07
Strontium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Vanadium,Dissolved	< .01	mg/l			WG602246	07/13/12 11:07
Zinc,Dissolved	< .03	mg/l			WG602246	07/13/12 11:07
Specific Conductance	1.42	umhos/cm			WG602349	07/13/12 14:32
Antimony,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Arsenic,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Molybdenum,Dissolved	< .002	mg/l			WG602266	07/13/12 19:17
Selenium,Dissolved	< .001	mg/l			WG602266	07/13/12 19:17
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Chloride	mg/l	16.0	17.0	2.99	20	L583531-01	WG601502
Chloride	mg/l	0	0	0	20	L583531-02	WG601502
pH	su	7.80	7.80	0.385	1	L583500-02	WG601565
pH	su	8.40	8.40	0.357	1	L583831-10	WG601565
Sulfate	mg/l	150.	150.	0.664	20	L583596-01	WG601787
Alkalinity	mg/l	280.	280.	1.77	20	L583651-01	WG601754
Alkalinity	mg/l	590.	600.	1.34	20	L583819-04	WG601754
TOC (Total Organic Carbon)	mg/l	270.	260.	3.33	20	L582994-04	WG601789
TOC (Total Organic Carbon)	mg/l	210.	220.	4.22	20	L583672-01	WG601789
Dissolved Solids	mg/l	15.0	15.0	0	5	L583641-05	WG601740
Mercury,Dissolved	mg/l	0	0	0	20	L583595-01	WG602022
Barium,Dissolved	mg/l	0.0220	0.0214	2.31	20	L583784-01	WG602246
Boron,Dissolved	mg/l	0	0.0112	NA	0	L583784-01	WG602246
Calcium,Dissolved	mg/l	18.0	17.8	1.12	20	L583784-01	WG602246
Chromium,Dissolved	mg/l	0	0.00210	NA	20	L583784-01	WG602246
Cobalt,Dissolved	mg/l	0	0.00270	NA	20	L583784-01	WG602246
Copper,Dissolved	mg/l	0	0.00740	NA	20	L583784-01	WG602246
Iron,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Magnesium,Dissolved	mg/l	1.60	1.53	5.10	20	L583784-01	WG602246
Manganese,Dissolved	mg/l	0	0.00460	NA	20	L583784-01	WG602246
Nickel,Dissolved	mg/l	0	0.000600	NA	20	L583784-01	WG602246

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Potassium,Dissolved	mg/l	1.00	1.06	6.23	20	L583784-01	WG602246
Silicon,Dissolved	mg/l	1.60	1.57	1.89*	0	L583784-01	WG602246
Sodium,Dissolved	mg/l	3.00	2.96	1.68	20	L583784-01	WG602246
Strontium,Dissolved	mg/l	0.0470	0.0488	3.33	20	L583784-01	WG602246
Vanadium,Dissolved	mg/l	0	0	0	20	L583784-01	WG602246
Zinc,Dissolved	mg/l	0.220	0.210	2.82	20	L583784-01	WG602246
Specific Conductance	umhos/cm	5.10	5.00	1.39	20	L583454-02	WG602349
Specific Conductance	umhos/cm	6000	6100	1.15	20	L584342-01	WG602349
Antimony,Dissolved	mg/l	0.00160	0.00180	9.91	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0460	0.0520	12.0	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0120	0.0121	5.08*	0	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.80	1.90	5.41	20	L584127-02	WG602266
Lithium,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Ethane	mg/l	.645	0.705	109.	70-130	WG601549
Ethene	mg/l	.635	0.678	107.	70-130	WG601549
Methane	mg/l	.339	0.361	107.	70-130	WG601549
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0285	114.	77-128	WG601474
1,1,1-Trichloroethane	mg/l	.025	0.0292	117.	71-126	WG601474
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0281	112.	78-130	WG601474
1,1,2-Trichloroethane	mg/l	.025	0.0277	111.	81-121	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0313	125.	53-143	WG601474
1,1-Dichloroethane	mg/l	.025	0.0279	111.	73-123	WG601474
1,1-Dichloroethene	mg/l	.025	0.0294	118.	54-134	WG601474
1,1-Dichloropropene	mg/l	.025	0.0278	111.	67-127	WG601474
1,2,3-Trichlorobenzene	mg/l	.025	0.0265	106.	77-130	WG601474
1,2,3-Trichloropropane	mg/l	.025	0.0309	123.	68-130	WG601474
1,2,3-Trimethylbenzene	mg/l	.025	0.0264	105.	77-126	WG601474
1,2,4-Trichlorobenzene	mg/l	.025	0.0266	106.	76-127	WG601474
1,2,4-Trimethylbenzene	mg/l	.025	0.0293	117.	77-129	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0254	102.	55-142	WG601474
1,2-Dibromoethane	mg/l	.025	0.0289	116.	78-124	WG601474
1,2-Dichlorobenzene	mg/l	.025	0.0257	103.	82-121	WG601474
1,2-Dichloroethane	mg/l	.025	0.0288	115.	69-128	WG601474
1,2-Dichloropropane	mg/l	.025	0.0280	112.	77-121	WG601474
1,3,5-Trimethylbenzene	mg/l	.025	0.0293	117.	78-127	WG601474
1,3-Dichlorobenzene	mg/l	.025	0.0282	113.	77-127	WG601474
1,3-Dichloropropane	mg/l	.025	0.0281	112.	78-117	WG601474
1,4-Dichlorobenzene	mg/l	.025	0.0258	103.	79-117	WG601474
2,2-Dichloropropane	mg/l	.025	0.0262	105.	63-130	WG601474
2-Butanone (MEK)	mg/l	.125	0.147	118.	58-144	WG601474
2-Chloroethyl vinyl ether	mg/l	.125	0.114	90.9	26-172	WG601474
2-Chlorotoluene	mg/l	.025	0.0279	112.	78-123	WG601474
4-Chlorotoluene	mg/l	.025	0.0286	114.	78-122	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.147	118.	58-147	WG601474
Acetone	mg/l	.125	0.151	121.	49-153	WG601474
Acrolein	mg/l	.125	0.126	101.	10-181	WG601474
Acrylonitrile	mg/l	.125	0.144	115.	53-153	WG601474

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0259	104.	72-119	WG601474
Bromobenzene	mg/l	.025	0.0280	112.	76-121	WG601474
Bromodichloromethane	mg/l	.025	0.0274	109.	75-127	WG601474
Bromoform	mg/l	.025	0.0276	110.	61-136	WG601474
Bromomethane	mg/l	.025	0.0317	127.	42-172	WG601474
Carbon tetrachloride	mg/l	.025	0.0300	120.	63-129	WG601474
Chlorobenzene	mg/l	.025	0.0281	112.	78-123	WG601474
Chlorodibromomethane	mg/l	.025	0.0277	111.	73-128	WG601474
Chloroethane	mg/l	.025	0.0299	120.	52-164	WG601474
Chloroform	mg/l	.025	0.0278	111.	76-122	WG601474
Chloromethane	mg/l	.025	0.0276	110.	50-141	WG601474
cis-1,2-Dichloroethene	mg/l	.025	0.0283	113.	75-121	WG601474
cis-1,3-Dichloropropene	mg/l	.025	0.0276	110.	74-124	WG601474
Di-isopropyl ether	mg/l	.025	0.0277	111.	66-129	WG601474
Dibromomethane	mg/l	.025	0.0277	111.	77-124	WG601474
Dichlorodifluoromethane	mg/l	.025	0.0330	132.	33-173	WG601474
Ethylbenzene	mg/l	.025	0.0280	112.	77-124	WG601474
Hexachloro-1,3-butadiene	mg/l	.025	0.0271	108.	71-134	WG601474
Isopropylbenzene	mg/l	.025	0.0286	115.	74-126	WG601474
Methyl tert-butyl ether	mg/l	.025	0.0303	121.	67-127	WG601474
Methylene Chloride	mg/l	.025	0.0278	111.	67-122	WG601474
n-Butylbenzene	mg/l	.025	0.0267	107.	74-130	WG601474
n-Propylbenzene	mg/l	.025	0.0279	112.	77-125	WG601474
Naphthalene	mg/l	.025	0.0268	107.	70-134	WG601474
p-Isopropyltoluene	mg/l	.025	0.0298	119.	77-132	WG601474
sec-Butylbenzene	mg/l	.025	0.0292	117.	77-130	WG601474
Styrene	mg/l	.025	0.0268	107.	69-145	WG601474
tert-Butylbenzene	mg/l	.025	0.0295	118.	76-131	WG601474
Tetrachloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Toluene	mg/l	.025	0.0273	109.	75-114	WG601474
trans-1,2-Dichloroethene	mg/l	.025	0.0284	113.	63-127	WG601474
trans-1,3-Dichloropropene	mg/l	.025	0.0272	109.	69-124	WG601474
Trichloroethene	mg/l	.025	0.0272	109.	69-131	WG601474
Trichlorofluoromethane	mg/l	.025	0.0140	56.0	53-161	WG601474
Vinyl chloride	mg/l	.025	0.0282	113.	55-142	WG601474
Xylenes, Total	mg/l	.075	0.0849	113.	77-123	WG601474
4-Bromofluorobenzene				109.2	82-120	WG601474
Dibromofluoromethane				102.0	82-126	WG601474
Toluene-d8				102.7	92-112	WG601474
Bromide	mg/l	40	41.3	103.	90-110	WG601502
Chloride	mg/l	40	40.0	100.	90-110	WG601502
Fluoride	mg/l	8	8.12	102.	90-110	WG601502
TPH (GC/FID) Low Fraction	mg/l	5.5	6.37	116.	70-124	WG601602
a,a,a-Trifluorotoluene(FID)				109.0	62-128	WG601602
pH	su	5.7	5.71	100.	98-101	WG601565
Sulfate	mg/l	40	39.7	99.3	90-110	WG601787
Alkalinity	mg/l	100	95.7	95.7	85-115	WG601754

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
TOC (Total Organic Carbon)	mg/l	75	77.2	103.	85-115	WG601789
Dissolved Solids	mg/l	8800	8730	99.2	85-115	WG601740
1,2,4-Trichlorobenzene	mg/l	.01	0.00564	56.4	18-130	WG601533
2,4,6-Trichlorophenol	mg/l	.01	0.00700	70.0	12-147	WG601533
2,4-Dichlorophenol	mg/l	.01	0.00748	74.8	10-157	WG601533
2,4-Dimethylphenol	mg/l	.01	0.00799	79.9	19-160	WG601533
2,4-Dinitrophenol	mg/l	.01	0.00682	68.2	10-135	WG601533
2,4-Dinitrotoluene	mg/l	.01	0.00661	66.1	30-168	WG601533
2,6-Dinitrotoluene	mg/l	.01	0.00666	66.6	32-163	WG601533
2-Chloronaphthalene	mg/l	.01	0.00797	79.7	29-149	WG601533
2-Chlorophenol	mg/l	.01	0.00598	59.8	16-129	WG601533
2-Nitrophenol	mg/l	.01	0.00714	71.4	14-158	WG601533
3,3-Dichlorobenzidine	mg/l	.01	0.00746	74.6	42-150	WG601533
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00750	75.0	10-164	WG601533
4-Bromophenyl-phenylether	mg/l	.01	0.00874	87.4	40-166	WG601533
4-Chloro-3-methylphenol	mg/l	.01	0.00762	76.2	14-158	WG601533
4-Chlorophenyl-phenylether	mg/l	.01	0.00868	86.8	39-155	WG601533
4-Nitrophenol	mg/l	.01	0.00100	10.0	10-61	WG601533
Acenaphthene	mg/l	.01	0.00885	88.5	37-159	WG601533
Acenaphthylene	mg/l	.01	0.00788	78.8	34-162	WG601533
Anthracene	mg/l	.01	0.00871	87.1	48-167	WG601533
Benizidine	mg/l	.01	0.00254	25.4	10-86	WG601533
Benzo(a)anthracene	mg/l	.01	0.00921	92.1	46-167	WG601533
Benzo(a)pyrene	mg/l	.01	0.00878	87.8	39-167	WG601533
Benzo(b)fluoranthene	mg/l	.01	0.00891	89.1	39-173	WG601533
Benzo(g,h,i)perylene	mg/l	.01	0.00891	89.1	42-181	WG601533
Benzo(k)fluoranthene	mg/l	.01	0.00955	95.5	42-178	WG601533
Benzylbutyl phthalate	mg/l	.01	0.0101	101.	10-178	WG601533
Bis(2-chlorethoxy)methane	mg/l	.01	0.00863	86.3	34-155	WG601533
Bis(2-chloroethyl)ether	mg/l	.01	0.00693	69.3	22-149	WG601533
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00720	72.0	26-149	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.0116	116.	42-191	WG601533
Chrysene	mg/l	.01	0.00966	96.6	46-170	WG601533
Di-n-butyl phthalate	mg/l	.01	0.0100	100.	33-175	WG601533
Di-n-octyl phthalate	mg/l	.01	0.00937	93.7	40-170	WG601533
Dibenz(a,h)anthracene	mg/l	.01	0.00881	88.1	43-187	WG601533
Diethyl phthalate	mg/l	.01	0.0103	103.	10-182	WG601533
Dimethyl phthalate	mg/l	.01	0.00998	99.8	10-165	WG601533
Fluoranthene	mg/l	.01	0.00930	93.0	46-171	WG601533
Fluorene	mg/l	.01	0.00890	89.0	39-163	WG601533
Hexachloro-1,3-butadiene	mg/l	.01	0.00560	56.0	18-136	WG601533
Hexachlorobenzene	mg/l	.01	0.00859	85.9	38-163	WG601533
Hexachlorocyclopentadiene	mg/l	.01	0.00412	41.2	10-142	WG601533
Hexachloroethane	mg/l	.01	0.00459	45.9	10-130	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00879	87.9	42-184	WG601533
Isophorone	mg/l	.01	0.00883	88.3	36-166	WG601533
n-Nitrosodi-n-propylamine	mg/l	.01	0.00802	80.2	27-157	WG601533
n-Nitrosodimethylamine	mg/l	.01	0.00658	65.8	10-96	WG601533
n-Nitrosodiphenylamine	mg/l	.01	0.00892	89.2	41-168	WG601533
Naphthalene	mg/l	.01	0.00732	73.2	26-147	WG601533
Nitrobenzene	mg/l	.01	0.00747	74.7	22-154	WG601533
Pentachlorophenol	mg/l	.01	0.00568	56.8	10-128	WG601533
Phenanthrene	mg/l	.01	0.00932	93.2	46-163	WG601533
Phenol	mg/l	.01	0.00307	30.7	10-69	WG601533
Pyrene	mg/l	.01	0.0109	109.	45-176	WG601533

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2,4,6-Tribromophenol				84.23	16-147	
2-Fluorobiphenyl				92.72	29-127	
2-Fluorophenol				37.92	10-75	
Nitrobenzene-d5				80.68	17-119	
Phenol-d5				28.85	10-63	
p-Terphenyl-d14				98.23	40-174	
TPH (GC/FID) High Fraction	ppm	1.5	1.80	120.	50-150	WG601857
o-Terphenyl				109.9	50-150	WG601857
Mercury, Dissolved	mg/l	.003	0.00333	111.	85-115	WG602022
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG602246
Boron, Dissolved	mg/l	1	0.997	99.7	85-115	WG602246
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG602246
Chromium, Dissolved	mg/l	1	1.05	105.	85-115	WG602246
Cobalt, Dissolved	mg/l	1	1.04	104.	85-115	WG602246
Copper, Dissolved	mg/l	1	1.00	100.	85-115	WG602246
Iron, Dissolved	mg/l	1	1.10	110.	85-115	WG602246
Magnesium, Dissolved	mg/l	10	10.7	107.	85-115	WG602246
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG602246
Nickel, Dissolved	mg/l	1	1.04	104.	85-115	WG602246
Potassium, Dissolved	mg/l	10	9.81	98.1	85-115	WG602246
Silicon, Dissolved	mg/l	1	1.10	110.	85-115	WG602246
Sodium, Dissolved	mg/l	10	10.4	104.	85-115	WG602246
Strontium, Dissolved	mg/l	1	1.06	106.	85-115	WG602246
Vanadium, Dissolved	mg/l	1	1.03	103.	85-115	WG602246
Zinc, Dissolved	mg/l	1	1.03	103.	85-115	WG602246
Specific Conductance	umhos/cm	495	504.	102.	85-115	WG602349
Antimony, Dissolved	mg/l	.05	0.0531	106.	85-115	WG602266
Arsenic, Dissolved	mg/l	.05	0.0495	99.0	85-115	WG602266
Molybdenum, Dissolved	mg/l	.05	0.0513	103.	85-115	WG602266
Selenium, Dissolved	mg/l	.05	0.0464	92.8	85-115	WG602266
Lithium, Dissolved	mg/l	.5	0.538	108.	85-115	WG603226

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
Ethane	mg/l	0.675	0.705	105.	70-130	4.41	25	WG601549
Ethene	mg/l	0.650	0.678	102.	70-130	4.17	25	WG601549
Methane	mg/l	0.345	0.361	102.	70-130	4.61	25	WG601549
1,1,1,2-Tetrachloroethane	mg/l	0.0273	0.0285	109.	77-128	4.32	20	WG601474
1,1,1-Trichloroethane	mg/l	0.0304	0.0292	122.	71-126	4.05	20	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0270	0.0281	108.	78-130	3.92	20	WG601474
1,1,2-Trichloroethane	mg/l	0.0274	0.0277	110.	81-121	0.790	20	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0322	0.0313	129.	53-143	2.89	20	WG601474
1,1-Dichloroethane	mg/l	0.0285	0.0279	114.	73-123	2.24	20	WG601474
1,1-Dichloroethene	mg/l	0.0301	0.0294	120.	54-134	2.20	20	WG601474
1,1-Dichloropropene	mg/l	0.0294	0.0278	118.	67-127	5.61	20	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0274	0.0265	110.	77-130	3.57	20	WG601474

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Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
1,2,3-Trichloropropane	mg/l	0.0300	0.0309	120.		68-130	2.71	20	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0273	0.0264	109.		77-126	3.64	20	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0276	0.0266	110.		76-127	3.84	20	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0293	114.		77-129	2.58	20	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0254	106.		55-142	3.89	20	WG601474
1,2-Dibromoethane	mg/l	0.0282	0.0289	113.		78-124	2.33	20	WG601474
1,2-Dichlorobenzene	mg/l	0.0262	0.0257	105.		82-121	2.03	20	WG601474
1,2-Dichloroethane	mg/l	0.0300	0.0288	120.		69-128	4.14	20	WG601474
1,2-Dichloropropane	mg/l	0.0283	0.0280	113.		77-121	0.890	20	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0279	0.0293	112.		78-127	5.03	20	WG601474
1,3-Dichlorobenzene	mg/l	0.0264	0.0282	106.		77-127	6.49	20	WG601474
1,3-Dichloropropane	mg/l	0.0278	0.0281	111.		78-117	0.770	20	WG601474
1,4-Dichlorobenzene	mg/l	0.0265	0.0258	106.		79-117	2.64	20	WG601474
2,2-Dichloropropane	mg/l	0.0275	0.0262	110.		63-130	4.95	20	WG601474
2-Butanone (MEK)	mg/l	0.151	0.147	121.		58-144	2.69	20	WG601474
2-Chloroethyl vinyl ether	mg/l	0.131	0.114	105.		26-172	14.4	22	WG601474
2-Chlorotoluene	mg/l	0.0284	0.0279	114.		78-123	1.69	20	WG601474
4-Chlorotoluene	mg/l	0.0278	0.0286	111.		78-122	2.54	20	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.146	0.147	117.		58-147	0.750	20	WG601474
Acetone	mg/l	0.156	0.151	124.		49-153	3.12	21	WG601474
Acrolein	mg/l	0.125	0.126	100.		10-181	1.00	30	WG601474
Acrylonitrile	mg/l	0.143	0.144	115.		53-153	0.300	20	WG601474
Benzene	mg/l	0.0269	0.0259	108.		72-119	3.81	20	WG601474
Bromobenzene	mg/l	0.0275	0.0280	110.		76-121	1.64	20	WG601474
Bromodichloromethane	mg/l	0.0281	0.0274	112.		75-127	2.69	20	WG601474
Bromoform	mg/l	0.0270	0.0276	108.		61-136	2.22	20	WG601474
Bromomethane	mg/l	0.0332	0.0317	133.		42-172	4.55	20	WG601474
Carbon tetrachloride	mg/l	0.0308	0.0300	123.		63-129	2.57	20	WG601474
Chlorobenzene	mg/l	0.0269	0.0281	107.		78-123	4.33	20	WG601474
Chlorodibromomethane	mg/l	0.0273	0.0277	109.		73-128	1.51	20	WG601474
Chloroethane	mg/l	0.0305	0.0299	122.		52-164	1.71	20	WG601474
Chloroform	mg/l	0.0282	0.0278	113.		76-122	1.44	20	WG601474
Chloromethane	mg/l	0.0279	0.0276	112.		50-141	1.22	20	WG601474
cis-1,2-Dichloroethene	mg/l	0.0285	0.0283	114.		75-121	0.500	20	WG601474
cis-1,3-Dichloropropene	mg/l	0.0285	0.0276	114.		74-124	3.32	20	WG601474
Di-isopropyl ether	mg/l	0.0285	0.0277	114.		66-129	3.07	20	WG601474
Dibromomethane	mg/l	0.0292	0.0277	117.		77-124	5.35	20	WG601474
Dichlorodifluoromethane	mg/l	0.0337	0.0330	135.		33-173	1.91	20	WG601474
Ethylbenzene	mg/l	0.0272	0.0280	109.		77-124	2.83	20	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0280	0.0271	112.		71-134	3.39	20	WG601474
Isopropylbenzene	mg/l	0.0273	0.0286	109.		74-126	4.70	20	WG601474
Methyl tert-butyl ether	mg/l	0.0300	0.0303	120.		67-127	1.10	20	WG601474
Methylene Chloride	mg/l	0.0281	0.0278	112.		67-122	1.11	20	WG601474
n-Butylbenzene	mg/l	0.0278	0.0267	111.		74-130	3.90	20	WG601474
n-Propylbenzene	mg/l	0.0272	0.0279	109.		77-125	2.39	20	WG601474
Naphthalene	mg/l	0.0277	0.0268	111.		70-134	3.29	20	WG601474
p-Isopropyltoluene	mg/l	0.0280	0.0298	112.		77-132	5.96	20	WG601474
sec-Butylbenzene	mg/l	0.0279	0.0292	111.		77-130	4.72	20	WG601474
Styrene	mg/l	0.0262	0.0268	105.		69-145	2.28	20	WG601474
tert-Butylbenzene	mg/l	0.0282	0.0295	113.		76-131	4.46	20	WG601474
Tetrachloroethene	mg/l	0.0264	0.0272	106.		69-131	2.89	20	WG601474
Toluene	mg/l	0.0278	0.0273	111.		75-114	1.56	20	WG601474
trans-1,2-Dichloroethene	mg/l	0.0288	0.0284	115.		63-127	1.43	20	WG601474
trans-1,3-Dichloropropene	mg/l	0.0290	0.0272	116.		69-124	6.55	20	WG601474
Trichloroethene	mg/l	0.0281	0.0272	112.		69-131	3.07	20	WG601474
Trichlorofluoromethane	mg/l	0.0137	0.0140	55.0		53-161	2.28	20	WG601474
Vinyl chloride	mg/l	0.0290	0.0282	116.		55-142	2.93	20	WG601474
Xylenes, Total	mg/l	0.0814	0.0849	108.		77-123	4.14	20	WG601474
4-Bromofluorobenzene				104.9		82-120			WG601474

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Dibromofluoromethane				103.3	82-126			
Toluene-d8				104.7	92-112			
Bromide	mg/l	40.6	41.3	102.	90-110	1.71	20	WG601502
Chloride	mg/l	40.2	40.0	100.	90-110	0.499	20	WG601502
Fluoride	mg/l	8.15	8.12	102.	90-110	0.369	20	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.18	6.37	112.	70-124	3.01	20	WG601602
a,a,a-Trifluorotoluene(FID)				108.6	62-128			WG601602
pH	su	5.70	5.71	100.	98-101	0.175	20	WG601565
Sulfate	mg/l	39.7	39.7	99.0	90-110	0	20	WG601787
Alkalinity	mg/l	97.4	95.7	97.0	85-115	1.76	20	WG601754
TOC (Total Organic Carbon)	mg/l	76.5	77.2	102.	85-115	1.01	20	WG601789
Dissolved Solids	mg/l	8670	8730	98.0	85-115	0.690	20	WG601740
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00564	53.0	18-130	6.06	32	WG601533
2,4,6-Trichlorophenol	mg/l	0.00713	0.00700	71.0	12-147	1.80	40	WG601533
2,4-Dichlorophenol	mg/l	0.00708	0.00748	71.0	10-157	5.50	40	WG601533
2,4-Dimethylphenol	mg/l	0.00527	0.00799	53.0	19-160	41.1*	40	WG601533
2,4-Dinitrophenol	mg/l	0.00704	0.00682	70.0	10-135	3.24	40	WG601533
2,4-Dinitrotoluene	mg/l	0.00641	0.00661	64.0	30-168	3.10	32	WG601533
2,6-Dinitrotoluene	mg/l	0.00671	0.00666	67.0	32-163	0.674	30	WG601533
2-Chloronaphthalene	mg/l	0.00714	0.00797	71.0	29-149	11.0	34	WG601533
2-Chlorophenol	mg/l	0.00611	0.00598	61.0	16-129	2.15	40	WG601533
2-Nitrophenol	mg/l	0.00724	0.00714	72.0	14-158	1.40	40	WG601533
3,3-Dichlorobenzidine	mg/l	0.00723	0.00746	72.0	42-150	3.12	29	WG601533
4,6-Dinitro-2-methylphenol	mg/l	0.00836	0.00750	84.0	10-164	10.9	40	WG601533
4-Bromophenyl-phenylether	mg/l	0.00799	0.00874	80.0	40-166	8.98	36	WG601533
4-Chloro-3-methylphenol	mg/l	0.00740	0.00762	74.0	14-158	2.95	40	WG601533
4-Chlorophenyl-phenylether	mg/l	0.00796	0.00868	80.0	39-155	8.66	33	WG601533
4-Nitrophenol	mg/l	0.00121	0.00100	12.0	10-61	18.7	40	WG601533
Acenaphthene	mg/l	0.00838	0.00885	84.0	37-159	5.40	30	WG601533
Acenaphthylene	mg/l	0.00737	0.00788	74.0	34-162	6.66	31	WG601533
Anthracene	mg/l	0.00840	0.00871	84.0	48-167	3.66	26	WG601533
Benzydine	mg/l	0.00206	0.00254	20.0	10-86	20.9	40	WG601533
Benzo(a)anthracene	mg/l	0.00877	0.00921	88.0	46-167	4.91	29	WG601533
Benzo(a)pyrene	mg/l	0.00821	0.00878	82.0	39-167	6.78	29	WG601533
Benzo(b)fluoranthene	mg/l	0.00844	0.00891	84.0	39-173	5.35	32	WG601533
Benzo(g,h,i)perylene	mg/l	0.00856	0.00891	86.0	42-181	4.04	30	WG601533
Benzo(k)fluoranthene	mg/l	0.00898	0.00955	90.0	42-178	6.14	33	WG601533
Benzylbutyl phthalate	mg/l	0.00969	0.0101	97.0	10-178	4.49	40	WG601533
Bis(2-chlorethoxy)methane	mg/l	0.00810	0.00863	81.0	34-155	6.26	31	WG601533
Bis(2-chloroethyl)ether	mg/l	0.00673	0.00693	67.0	22-149	2.89	38	WG601533
Bis(2-chloroisopropyl)ether	mg/l	0.00679	0.00720	68.0	26-149	5.88	34	WG601533
Bis(2-ethylhexyl)phthalate	mg/l	0.0107	0.0116	107.	42-191	8.39	33	WG601533
Chrysene	mg/l	0.00950	0.00966	95.0	46-170	1.60	30	WG601533
Di-n-butyl phthalate	mg/l	0.00974	0.0100	97.0	33-175	2.99	39	WG601533
Di-n-octyl phthalate	mg/l	0.00923	0.00937	92.0	40-170	1.56	28	WG601533

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Dibenz(a,h)anthracene	mg/l	0.00841	0.00881	84.0	43-187	4.61	31	WG601533
Diethyl phthalate	mg/l	0.0103	0.0103	103.	10-182	0.456	35	WG601533
Dimethyl phthalate	mg/l	0.00982	0.00998	98.0	10-165	1.60	37	WG601533
Fluoranthene	mg/l	0.00880	0.00930	88.0	46-171	5.61	37	WG601533
Fluorene	mg/l	0.00839	0.00890	84.0	39-163	5.90	36	WG601533
Hexachloro-1,3-butadiene	mg/l	0.00504	0.00560	50.0	18-136	10.5	30	WG601533
Hexachlorobenzene	mg/l	0.00814	0.00859	81.0	38-163	5.37	35	WG601533
Hexachlorocyclopentadiene	mg/l	0.00346	0.00412	35.0	10-142	17.4	40	WG601533
Hexachloroethane	mg/l	0.00455	0.00459	45.0	10-130	0.935	39	WG601533
Indeno(1,2,3-cd)pyrene	mg/l	0.00829	0.00879	83.0	42-184	5.95	32	WG601533
Isophorone	mg/l	0.00894	0.00883	89.0	36-166	1.30	35	WG601533
n-Nitrosodi-n-propylamine	mg/l	0.00788	0.00802	79.0	27-157	1.66	31	WG601533
n-Nitrosodimethylamine	mg/l	0.00748	0.00658	75.0	10-96	12.9	36	WG601533
n-Nitrosodiphenylamine	mg/l	0.00862	0.00892	86.0	41-168	3.35	37	WG601533
Naphthalene	mg/l	0.00689	0.00732	69.0	26-147	6.13	31	WG601533
Nitrobenzene	mg/l	0.00756	0.00747	76.0	22-154	1.23	37	WG601533
Pentachlorophenol	mg/l	0.00498	0.00568	50.0	10-128	13.1	40	WG601533
Phenanthrene	mg/l	0.00893	0.00932	89.0	46-163	4.24	29	WG601533
Phenol	mg/l	0.00276	0.00307	28.0	10-69	10.4	40	WG601533
Pyrene	mg/l	0.0103	0.0109	103.	45-176	5.30	28	WG601533
2,4,6-Tribromophenol				82.16	16-147			WG601533
2-Fluorobiphenyl				84.65	29-127			WG601533
2-Fluorophenol				38.24	10-75			WG601533
Nitrobenzene-d5				78.51	17-119			WG601533
Phenol-d5				26.91	10-63			WG601533
p-Terphenyl-d14				95.38	40-174			WG601533
TPH (GC/FID) High Fraction	ppm	1.80	1.80	120.	50-150	0	20	WG601857
o-Terphenyl				107.1	50-150			WG601857
Barium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Boron,Dissolved	mg/l	1.02	0.997	102.	85-115	2.28	20	WG602246
Calcium,Dissolved	mg/l	10.8	10.5	108.	85-115	2.82	20	WG602246
Chromium,Dissolved	mg/l	1.08	1.05	108.	85-115	2.82	20	WG602246
Cobalt,Dissolved	mg/l	1.06	1.04	106.	85-115	1.90	20	WG602246
Copper,Dissolved	mg/l	1.03	1.00	103.	85-115	2.96	20	WG602246
Iron,Dissolved	mg/l	1.14	1.10	114.	85-115	3.57	20	WG602246
Magnesium,Dissolved	mg/l	11.0	10.7	110.	85-115	2.76	20	WG602246
Manganese,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Nickel,Dissolved	mg/l	1.07	1.04	107.	85-115	2.84	20	WG602246
Potassium,Dissolved	mg/l	10.3	9.81	103.	85-115	4.87	20	WG602246
Silicon,Dissolved	mg/l	1.13	1.10	113.	85-115	2.69	20	WG602246
Sodium,Dissolved	mg/l	10.7	10.4	107.	85-115	2.84	20	WG602246
Strontium,Dissolved	mg/l	1.08	1.06	108.	85-115	1.87	20	WG602246
Vanadium,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Zinc,Dissolved	mg/l	1.06	1.03	106.	85-115	2.87	20	WG602246
Specific Conductance	umhos/	504.	504.	102.	85-115	0	20	WG602349

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0283	0	.025	113.	71-130	L583526-03	WG601474
1,1,1-Trichloroethane	mg/l	0.0338	0	.025	135.	58-137	L583526-03	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0278	0	.025	111.	64-149	L583526-03	WG601474
1,1,2-Trichloroethane	mg/l	0.0267	0	.025	107.	73-128	L583526-03	WG601474

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0376	0	.025	150.	36-159	L583526-03	WG601474
1,1-Dichloroethane	mg/l	0.0298	0	.025	119.	58-133	L583526-03	WG601474
1,1-Dichloroethene	mg/l	0.0335	0	.025	134.	32-152	L583526-03	WG601474
1,1-Dichloropropene	mg/l	0.0325	0	.025	130.	50-140	L583526-03	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0270	0	.025	108.	68-135	L583526-03	WG601474
1,2,3-Trichloropropane	mg/l	0.0297	0	.025	119.	74-137	L583526-03	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0283	0	.025	113.	67-133	L583526-03	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0280	0	.025	112.	67-133	L583526-03	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0299	0	.025	119.	62-141	L583526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0250	0	.025	99.8	55-148	L583526-03	WG601474
1,2-Dibromoethane	mg/l	0.0278	0	.025	111.	71-129	L583526-03	WG601474
1,2-Dichlorobenzene	mg/l	0.0266	0	.025	106.	75-125	L583526-03	WG601474
1,2-Dichloroethane	mg/l	0.0285	0	.025	114.	59-135	L583526-03	WG601474
1,2-Dichloropropane	mg/l	0.0277	0	.025	111.	68-126	L583526-03	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0307	0	.025	123.	67-136	L583526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0284	0	.025	114.	69-131	L583526-03	WG601474
1,3-Dichloropropane	mg/l	0.0275	0	.025	110.	70-122	L583526-03	WG601474
1,4-Dichlorobenzene	mg/l	0.0276	0	.025	110.	70-123	L583526-03	WG601474
2,2-Dichloropropane	mg/l	0.0314	0	.025	126.	51-141	L583526-03	WG601474
2-Butanone (MEK)	mg/l	0.110	0	.125	88.0	51-149	L583526-03	WG601474
2-Chloroethyl vinyl ether	mg/l	0.0426	0	.125	34.1	10-161	L583526-03	WG601474
2-Chlorotoluene	mg/l	0.0284	0	.025	114.	65-133	L583526-03	WG601474
4-Chlorotoluene	mg/l	0.0297	0	.025	119.	67-129	L583526-03	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.140	0	.125	112.	53-154	L583526-03	WG601474
Acetone	mg/l	0.0871	0	.125	69.6	34-146	L583526-03	WG601474
Acrolein	mg/l	0.107	0	.125	85.4	10-189	L583526-03	WG601474
Acrylonitrile	mg/l	0.146	0	.125	117.	49-162	L583526-03	WG601474
Benzene	mg/l	0.0282	0	.025	113.	51-134	L583526-03	WG601474
Bromobenzene	mg/l	0.0282	0	.025	113.	64-130	L583526-03	WG601474
Bromodichloromethane	mg/l	0.0277	0	.025	111.	67-132	L583526-03	WG601474
Bromoform	mg/l	0.0261	0	.025	104.	59-137	L583526-03	WG601474
Bromomethane	mg/l	0.0327	0	.025	131.	23-177	L583526-03	WG601474
Carbon tetrachloride	mg/l	0.0350	0	.025	140.	49-140	L583526-03	WG601474
Chlorobenzene	mg/l	0.0281	0	.025	112.	69-126	L583526-03	WG601474
Chlorodibromomethane	mg/l	0.0270	0	.025	108.	68-130	L583526-03	WG601474
Chloroethane	mg/l	0.0332	0	.025	133.	32-177	L583526-03	WG601474
Chloroform	mg/l	0.0290	0	.025	116.	64-130	L583526-03	WG601474
Chloromethane	mg/l	0.0291	0	.025	116.	27-155	L583526-03	WG601474
cis-1,2-Dichloroethene	mg/l	0.0290	0	.025	116.	54-137	L583526-03	WG601474
cis-1,3-Dichloropropene	mg/l	0.0274	0	.025	109.	63-127	L583526-03	WG601474
Di-isopropyl ether	mg/l	0.0288	0	.025	115.	58-133	L583526-03	WG601474
Dibromomethane	mg/l	0.0271	0	.025	108.	68-131	L583526-03	WG601474
Dichlorodifluoromethane	mg/l	0.0382	0	.025	153.	16-188	L583526-03	WG601474
Ethylbenzene	mg/l	0.0297	0	.025	119.	64-135	L583526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0298	0	.025	119.	64-140	L583526-03	WG601474
Isopropylbenzene	mg/l	0.0305	0	.025	122.	62-134	L583526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0297	0	.025	119.	55-136	L583526-03	WG601474
Methylene Chloride	mg/l	0.0284	0	.025	114.	52-130	L583526-03	WG601474
n-Butylbenzene	mg/l	0.0305	0	.025	122.	62-142	L583526-03	WG601474
n-Propylbenzene	mg/l	0.0307	0	.025	123.	62-137	L583526-03	WG601474
Naphthalene	mg/l	0.0268	0	.025	107.	65-140	L583526-03	WG601474
p-Isopropyltoluene	mg/l	0.0320	0	.025	128.	64-142	L583526-03	WG601474
sec-Butylbenzene	mg/l	0.0316	0	.025	126.	67-139	L583526-03	WG601474
Styrene	mg/l	0.0271	0	.025	108.	58-152	L583526-03	WG601474
tert-Butylbenzene	mg/l	0.0310	0	.025	124.	66-139	L583526-03	WG601474
Tetrachloroethene	mg/l	0.0292	0	.025	117.	56-139	L583526-03	WG601474
Toluene	mg/l	0.0287	0	.025	115.	61-126	L583526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0314	0	.025	126.	45-137	L583526-03	WG601474
trans-1,3-Dichloropropene	mg/l	0.0268	0	.025	107.	59-130	L583526-03	WG601474

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Quality Assurance Report  
Level II

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Tax I.D. 62-0814289

Est. 1970

July 20, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Trichloroethene	mg/l	0.0290	0	.025	116.	40-155	L583526-03	WG601474
Trichlorofluoromethane	mg/l	0.0182	0	.025	72.8	35-177	L583526-03	WG601474
Vinyl chloride	mg/l	0.0318	0	.025	127.	32-159	L583526-03	WG601474
Xylenes, Total	mg/l	0.0886	0	.075	118.	64-133	L583526-03	WG601474
4-Bromofluorobenzene					109.0	82-120		WG601474
Dibromofluoromethane					104.0	82-126		WG601474
Toluene-d8					102.9	92-112		WG601474
Fluoride	mg/l	5.30	0	5	106.	80-120	L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.23	0	5.5	113.*	55-109	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)					108.4	62-128		WG601602
Sulfate	mg/l	213.	120.	50	93.0	80-120	L583595-01	WG601787
Alkalinity	mg/l	345.	280.	100	65.0*	80-120	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	55.3	3.40	50	104.	80-120	L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00260	0	.003	86.7	70-130	L583595-01	WG602022
Antimony,Dissolved	mg/l	0.0587	0.00180	.05	114.	75-125	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.0960	0.0520	.05	88.0	75-125	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0598	0.0121	.05	95.4	75-125	L584127-02	WG602266
Selenium,Dissolved	mg/l	1.88	1.90	.01	0*	75-125	L584127-02	WG602266
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0264	0.0283	105.	71-130	7.16	20	L583526-03	WG601474
1,1,1-Trichloroethane	mg/l	0.0326	0.0338	130.	58-137	3.59	20	L583526-03	WG601474
1,1,2,2-Tetrachloroethane	mg/l	0.0274	0.0278	110.	64-149	1.13	20	L583526-03	WG601474
1,1,2-Trichloroethane	mg/l	0.0267	0.0267	107.	73-128	0.0900	20	L583526-03	WG601474
1,1,2-Trichlorotrifluoroethane	mg/l	0.0362	0.0376	145.	36-159	3.86	21	L583526-03	WG601474
1,1-Dichloroethane	mg/l	0.0293	0.0298	117.	58-133	1.85	20	L583526-03	WG601474
1,1-Dichloroethene	mg/l	0.0322	0.0335	129.	32-152	4.23	20	L583526-03	WG601474
1,1-Dichloropropene	mg/l	0.0313	0.0325	125.	50-140	3.76	20	L583526-03	WG601474
1,2,3-Trichlorobenzene	mg/l	0.0268	0.0270	107.	68-135	0.550	20	L583526-03	WG601474
1,2,3-Trichloropropane	mg/l	0.0292	0.0297	117.	74-137	1.60	20	L583526-03	WG601474
1,2,3-Trimethylbenzene	mg/l	0.0268	0.0283	107.	67-133	5.74	20	L583526-03	WG601474
1,2,4-Trichlorobenzene	mg/l	0.0275	0.0280	110.	67-133	1.63	20	L583526-03	WG601474
1,2,4-Trimethylbenzene	mg/l	0.0287	0.0299	115.	62-141	3.84	20	L583526-03	WG601474
1,2-Dibromo-3-Chloropropane	mg/l	0.0270	0.0250	108.	55-148	8.01	22	L583526-03	WG601474
1,2-Dibromoethane	mg/l	0.0273	0.0278	109.	71-129	1.80	20	L583526-03	WG601474
1,2-Dichlorobenzene	mg/l	0.0260	0.0266	104.	75-125	2.44	20	L583526-03	WG601474
1,2-Dichloroethane	mg/l	0.0290	0.0285	116.	59-135	1.82	20	L583526-03	WG601474
1,2-Dichloropropane	mg/l	0.0284	0.0277	114.	68-126	2.51	20	L583526-03	WG601474
1,3,5-Trimethylbenzene	mg/l	0.0286	0.0307	114.	67-136	6.84	20	L583526-03	WG601474
1,3-Dichlorobenzene	mg/l	0.0267	0.0284	107.	69-131	6.12	20	L583526-03	WG601474

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Est. 1970

Quality Assurance Report  
Level II

L583595

July 20, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,3-Dichloropropane	mg/l	0.0273	0.0275	109.	70-122	1.07	20	L583526-03	WG601474
1,4-Dichlorobenzene	mg/l	0.0258	0.0276	103.	70-123	6.60	20	L583526-03	WG601474
2,2-Dichloropropane	mg/l	0.0304	0.0314	122.	51-141	3.26	20	L583526-03	WG601474
2-Butanone (MEK)	mg/l	0.118	0.110	94.3	51-149	6.84	22	L583526-03	WG601474
2-Chloroethyl vinyl ether	mg/l	0.00592	0.0426	4.73*	10-161	151.*	40	L583526-03	WG601474
2-Chlorotoluene	mg/l	0.0282	0.0284	113.	65-133	0.690	20	L583526-03	WG601474
4-Chlorotoluene	mg/l	0.0276	0.0297	110.	67-129	7.44	20	L583526-03	WG601474
4-Methyl-2-pentanone (MIBK)	mg/l	0.148	0.140	119.	53-154	5.98	21	L583526-03	WG601474
Acetone	mg/l	0.0929	0.0871	74.3	34-146	6.49	22	L583526-03	WG601474
Acrolein	mg/l	0.103	0.107	82.1	10-189	3.95	30	L583526-03	WG601474
Acrylonitrile	mg/l	0.151	0.146	120.	49-162	3.17	20	L583526-03	WG601474
Benzene	mg/l	0.0273	0.0282	109.	51-134	3.17	20	L583526-03	WG601474
Bromobenzene	mg/l	0.0268	0.0282	107.	64-130	5.42	20	L583526-03	WG601474
Bromodichloromethane	mg/l	0.0277	0.0277	111.	67-132	0.120	20	L583526-03	WG601474
Bromoform	mg/l	0.0256	0.0261	102.	59-137	1.98	20	L583526-03	WG601474
Bromomethane	mg/l	0.0336	0.0327	134.	23-177	2.61	21	L583526-03	WG601474
Carbon tetrachloride	mg/l	0.0337	0.0350	135.	49-140	3.58	20	L583526-03	WG601474
Chlorobenzene	mg/l	0.0262	0.0281	105.	69-126	7.02	20	L583526-03	WG601474
Chlorodibromomethane	mg/l	0.0266	0.0270	106.	68-130	1.53	20	L583526-03	WG601474
Chloroethane	mg/l	0.0326	0.0332	130.	32-177	2.12	21	L583526-03	WG601474
Chloroform	mg/l	0.0288	0.0290	115.	64-130	0.710	20	L583526-03	WG601474
Chloromethane	mg/l	0.0291	0.0291	116.	27-155	0.180	20	L583526-03	WG601474
cis-1,2-Dichloroethene	mg/l	0.0283	0.0290	113.	54-137	2.54	20	L583526-03	WG601474
cis-1,3-Dichloropropene	mg/l	0.0275	0.0274	110.	63-127	0.430	20	L583526-03	WG601474
Di-isopropyl ether	mg/l	0.0292	0.0288	117.	58-133	1.30	20	L583526-03	WG601474
Dibromomethane	mg/l	0.0281	0.0271	112.	68-131	3.44	20	L583526-03	WG601474
Dichlorodifluoromethane	mg/l	0.0367	0.0382	147.	16-188	4.18	22	L583526-03	WG601474
Ethylbenzene	mg/l	0.0273	0.0297	109.	64-135	8.20	20	L583526-03	WG601474
Hexachloro-1,3-butadiene	mg/l	0.0294	0.0298	117.	64-140	1.49	20	L583526-03	WG601474
Isopropylbenzene	mg/l	0.0284	0.0305	114.	62-134	7.20	20	L583526-03	WG601474
Methyl tert-butyl ether	mg/l	0.0301	0.0297	120.	55-136	1.37	20	L583526-03	WG601474
Methylene Chloride	mg/l	0.0277	0.0284	111.	52-130	2.64	20	L583526-03	WG601474
n-Butylbenzene	mg/l	0.0302	0.0305	121.	62-142	1.24	20	L583526-03	WG601474
n-Propylbenzene	mg/l	0.0289	0.0307	116.	62-137	6.26	20	L583526-03	WG601474
Naphthalene	mg/l	0.0275	0.0268	110.	65-140	2.73	20	L583526-03	WG601474
p-Isopropyltoluene	mg/l	0.0302	0.0320	121.	64-142	5.78	20	L583526-03	WG601474
sec-Butylbenzene	mg/l	0.0293	0.0316	117.	67-139	7.60	20	L583526-03	WG601474
Styrene	mg/l	0.0264	0.0271	106.	58-152	2.74	20	L583526-03	WG601474
tert-Butylbenzene	mg/l	0.0290	0.0310	116.	66-139	6.72	20	L583526-03	WG601474
Tetrachloroethene	mg/l	0.0278	0.0292	111.	56-139	4.74	20	L583526-03	WG601474
Toluene	mg/l	0.0283	0.0287	113.	61-126	1.34	20	L583526-03	WG601474
trans-1,2-Dichloroethene	mg/l	0.0296	0.0314	118.	45-137	6.10	20	L583526-03	WG601474
trans-1,3-Dichloropropene	mg/l	0.0279	0.0268	111.	59-130	4.00	20	L583526-03	WG601474
Trichloroethene	mg/l	0.0285	0.0290	114.	40-155	1.47	20	L583526-03	WG601474
Trichlorofluoromethane	mg/l	0.0364	0.0182	145.	35-177	66.6*	23	L583526-03	WG601474
Vinyl chloride	mg/l	0.0316	0.0318	126.	32-159	0.610	21	L583526-03	WG601474
Xylenes, Total	mg/l	0.0832	0.0886	111.	64-133	6.28	20	L583526-03	WG601474
4-Bromofluorobenzene				106.3	82-120				WG601474
Dibromofluoromethane				105.4	82-126				WG601474
Toluene-d8				104.2	92-112				WG601474
Fluoride	mg/l	5.14	5.30	103.	80-120	3.07	20	L583789-01	WG601502
TPH (GC/FID) Low Fraction	mg/l	6.19	6.23	112.*	55-109	0.680	20	L583582-01	WG601602
a,a,a-Trifluorotoluene(FID)				108.7	62-128				WG601602

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Sulfate	mg/l	209.	213.	89.0	80-120	1.90	20	L583595-01	WG601787
Alkalinity	mg/l	346.	345.	66.0*	80-120	0.289	20	L583651-02	WG601754
TOC (Total Organic Carbon)	mg/l	53.3	55.3	99.9	80-120	3.63	20	L583352-23	WG601789
Mercury,Dissolved	mg/l	0.00259	0.00260	86.3	70-130	0.385	30	L583595-01	WG602022
Antimony,Dissolved	mg/l	0.0634	0.0587	123.	75-125	7.70	20	L584127-02	WG602266
Arsenic,Dissolved	mg/l	0.104	0.0960	104.	75-125	8.00	20	L584127-02	WG602266
Molybdenum,Dissolved	mg/l	0.0642	0.0598	104.	75-125	7.10	20	L584127-02	WG602266
Selenium,Dissolved	mg/l	2.03	1.88	260.*	75-125	7.67	20	L584127-02	WG602266
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226

Batch number /Run number / Sample number cross reference

WG601549: R2243273: L583595-01  
WG601474: R2243555: L583595-01  
WG601502: R2244754: L583595-01  
WG601602: R2245433: L583595-01  
WG601565: R2246534: L583595-01  
WG601787: R2246933: L583595-01  
WG601533: R2247133: L583595-01  
WG601754: R2247593: L583595-01  
WG601755: R2247613: L583595-01  
WG601756: R2247633: L583595-01  
WG601789: R2248876: L583595-01  
WG601740: R2249833: L583595-01  
WG601857: R2250554: L583595-01  
WG602022: R2253155: L583595-01  
WG602246: R2253894: L583595-01  
WG602349: R2254375: L583595-01  
WG602266: R2255453: L583595-01  
WG603226: R2264474: L583595-01

\* \* Calculations are performed prior to rounding of reported values.

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



**YOUR LAB OF CHOICE**

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L583595

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

July 20, 2012

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.



Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO  
81505

Alternate billing information:

Report to:

Aaron Stacy

Email to:

astacy@oaconsulting.com

Analysis/Container/Preservative

Chain of Custody  
Page 2 of 2

Prepared by:

 **ENVIRONMENTAL  
SCIENCE CORP.**

12065 Lebanon Road  
Mt. Juliet, TN 37122

Phone (615) 758-5858

Phone (800) 767-5859

FAX (615) 758-5859

Project Description: F12E Polyline Release City/State Collected: Silt, CO

Phone: 970.263.7800  
FAX:

Client Project #:  
F12E Poly Release

ESC Key:

Collected by: Aaron Stacy

Site/Facility ID#: F12E

P.O.#:

Collected by (signature):

**Rush?** ( Lab MUST Be Notified )

Same Day.....200%  
Next Day.....100%  
Two Day.....50%  
Three Day.....25%

Date Results Needed:

Email? ☐ No ☒ Yes

FAX? ☒ No ☐ Yes

No.  
of  
Cntrs

Packed on Ice N ☒

CoCode (lab use only)

Template/Prelogin

Shipped Via:

Remarks/Contaminant

Sample # (lab only)


Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	SVOC 8270-100ml No Pres.	Cl, F, NO3, NO2, pH, SO4-500ml No Pres.	Br, Cond, TDS-250ml No Pres.										
SCHIIR-070512	Grab	GW		07/05/12	1230	4	x	x	x										

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks:

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)	Date: 07/05/12	Time: 1700	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.5°	Bottles Received: 17
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/6/12	Time: 0900
				pH Checked: 22	NCF: 





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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593598

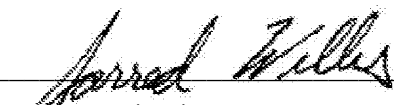
Samples Received: 09/06/12

Client Project: F12 Poly Release

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	19.	1.0	mg/l	9056	09/07/12	1
Fluoride	1.6	0.10	mg/l	9056	09/10/12	1
Sulfate	85.	5.0	mg/l	9056	09/07/12	1
Alkalinity	610	100	mg/l	2320B	09/11/12	5
Alkalinity,Bicarbonate	590	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	20.	20.	mg/l	2320B	09/11/12	1
Methane	0.017	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.5		su	9040C	09/11/12	1
Specific Conductance	1400		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.8	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	800	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0032	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.0061	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.0060	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.11	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	0.31	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	44.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.064	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	45.	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.5	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	7.5	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	220	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	1.5	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.5		% Rec.	8015D/GRO	09/09/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.1		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	106.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	109.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593598-01 (PH) - 8.5@15.5c



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 POLY RELEASE

Sample ID : SCHI1IR-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 09:15

ESC Sample # : L593598-01

Site ID : SCHI1IR

Project # : F12 Poly Release

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	57.9		% Rec.	8270 C	09/10/12	1
Phenol-d5	39.9		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	70.3		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	79.0		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	80.6		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	83.6		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:39  
L593598-01 (PH) - 8.5@15.5c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593598-01	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:40:03

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593598-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
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Quality Assurance Report  
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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12

\* Performance of this Analyte is outside of established criteria.

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858
Mercury,Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075
Calcium,Dissolved	mg/l	38.0	38.0		0	20	L593221-01	WG612075

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Est. 1970

September 16, 2012

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310

\* Performance of this Analyte is outside of established criteria.

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

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

September 16, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577

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Level II

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Est. 1970

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzydine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury, Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310

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**YOUR LAB OF CHOICE**

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.		55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.		78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.		82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0		69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0		77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.		78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.		77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0		78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0		79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0		63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.		58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0		26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.		78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.		78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0		58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0		49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0		10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0		53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0		72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.		76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0		75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.		61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.		42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0		63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.		78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.		73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0		52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0		76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0		50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0		75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0		74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0		66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.		77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0		33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.		77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.		71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.		74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0		67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0		67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0		74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.		77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.		70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.		77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.		77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.		69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.		76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.		69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.		75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.		63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.		69-124	1.79	20	WG611310
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0		34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0		48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0		10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0		46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0		39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0		39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0		42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0		42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0		10-178	21.9	40	WG611581

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YOUR LAB OF CHOICE

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Aaron Stacy  
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Parachute, CO 81635

Quality Assurance Report  
Level II

L593598

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421

TPH (GC/FID) Low Fraction mg/l 5.92 0 5.5 108. 55-109 L593663-01 WG611405

\* Performance of this Analyte is outside of established criteria.

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



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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
a,a,a-Trifluorotoluene(FID)					105.2	62-128		
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310	
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310	
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310	
4-Bromofluorobenzene				113.2	82-120				WG611310	
Dibromofluoromethane				92.21	82-126				WG611310	
Toluene-d8				100.1	92-112				WG611310	
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421	
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421	
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421	

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593598-01  
WG611471: R2334493: L593598-01  
WG611421: R2334814: L593598-01  
WG611526: R2336033: L593598-01  
WG611405: R2337235: L593598-01  
WG611718: R2338293: L593598-01  
WG611577: R2339033: L593598-01  
WG611624: R2339313: L593598-01  
WG611507: R2339873: L593598-01  
WG611870: R2339874: L593598-01  
WG611833: R2339913: L593598-01  
WG611835: R2339973: L593598-01  
WG611838: R2339993: L593598-01

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WG611581: R2340113: L593598-01  
WG611858: R2340713: L593598-01  
WG611391: R2340917: L593598-01  
WG612075: R2344074: L593598-01  
WG612100: R2347893: L593598-01

\* \* Calculations are performed prior to rounding of reported values.

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September 16, 2012

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.

**Olsson Associates**  
 826 21 1/2 Road  
 Grand Junction, CO 80505

Billing Information:  
 Encana Oil & Gas (USA) Inc.  
 2717 CR. 215 Suite 100  
 Parachute, Co. 81635  
 Attn: Charles Jensen  
 Report to: Aaron Stacy  
 Email to: astacy@olssonassociates.com

Analysis/Container/Preservative

Chain of Custody  
 Page 1 of 2



12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5859

E218

Project Description: F12 Poly Release  
 City/State Collected:  
 Phone: 970-263-7800 Client Project #: F12 Poly Release ESC Key: ENCRCO  
 FAX: Collected by: Aaron Stacy Site/Facility ID#: SCHI1IR P.O.#:  
 Collected by (signature): *[Signature]* **Rush?** ( Lab MUST Be Notified )  
 Immediately Packed on Ice N **(Y)** ☐ Same Day.....200%  
☐ Next Day.....100%  
☐ Two Day.....50%  
☐ Three Day.....25%  
 Date Results Needed:  
 Email? ☐ No ☐ Yes  
 FAX? ☐ No ☐ Yes

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK / ALKB1 / ALKCA	Dissolved Metals	GRO	DRO	RSK175	TOC	V8260	SVOC8270	Remarks/Contaminant	Sample # (lab only)
SCHI1IR-090512	Grab	GW		09/05/12	0915	17	x	x	x	x	x	x	x	x		L 59359801

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other  
 Remarks: Metals 200.7 - Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, U, Zn, Co  
 Metals 200.8 - Sb, As, Mo, Se, plus Hg  
 5040 0635 5837 pH Temp Flow Other

Relinquished by: (Signature) <i>[Signature]</i>	Date: 09/05/12	Time: 1515	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 3.7°C	Bottles Received: 17
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 9-6-12	Time: 0900
				pH Checked: 22	NCF:

Billing Information:

Encana Oil & Gas (USA) Inc.  
2717 CR. 215 Suite 100  
Parachute, Co. 81635

Attn: Charles Jensen

Report to: Aaron Stacy

Email to: [astacy@olssonassociates.com](mailto:astacy@olssonassociates.com)

[illegible]

ESC  
L.A.B. S.C.I.E.N.C.E.S.

Phone: (800) 767-5859  
Phone: (615) 758-5858  
Fax: (615) 758-5859

Project Description: F12 Poly Release		City/State Collected
Phone: 970-263-7800 FAX:	Client Project #: F12 Poly Release	ESC Key: ENCRCO
Collected by: Aaron Stacy	Site/Facility ID#: SCH11IR	P.O.#:

Collected by (signature):	<b>Rush?</b> ( Lab MUST Be Notified ) _____ Same Day.....200% _____ Next Day..... 100% _____ Two Day .....50% _____ Three Day ..... 25%	<b>Date Results Needed:</b>	No.  of
		Email? <input type="checkbox"/> No <input type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes	
Immediately Packed on Ice N <input type="checkbox"/> Y <input type="checkbox"/>			

**Shipped Via:**

[illegible]

Remarks/Contaminant	Sample # (lab only)
---------------------	---------------------

L S93895

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow	Other
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Relinquished by: (Signature)	Date: 09/05/12	Time: 1515	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7°C	Bottles Received: 17
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-6-13	Time: 0900
				pH Checked: 22	NCF:



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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Tax I.D. 62-0814289

Est. 1970

Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585014

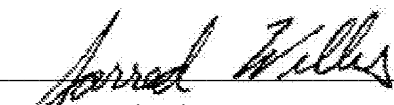
Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

  
Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	2.0	1.0	mg/l	9056	07/14/12	1
Chloride	650	10.	mg/l	9056	07/18/12	10
Fluoride	2.8	0.10	mg/l	9056	07/14/12	1
Sulfate	550	50.	mg/l	9056	07/18/12	10
Alkalinity	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	360	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	1.3	0.020	mg/l	RSK175	07/17/12	2
Ethane	BDL	0.026	mg/l	RSK175	07/17/12	2
Ethene	BDL	0.026	mg/l	RSK175	07/17/12	2
pH	7.9		su	9040C	07/17/12	1
Specific Conductance	3700		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	7.9	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2200	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.015	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.046	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.0098	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.066	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	64.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.092	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	4.6	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	0.11	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.7	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	4.2	0.20	mg/l	200.7	07/23/12	1
Sodium,Dissolved	740	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	2.1	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc,Dissolved	0.041	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.0		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	103.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	105.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	82.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c



REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L585014-01 (PH) - 7.9@20.8c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : LL041WW-071312312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 11:40

ESC Sample # : L585014-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	43.0		% Rec.	8270 C	07/18/12	1
Phenol-d5	32.4		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	68.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	74.0		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	57.1		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	75.7		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30  
L585014-01 (PH) - 7.9@20.8c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585014-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:07

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585014-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/18



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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* Performance of this Analyte is outside of established criteria.

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



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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG603173	07/18/12 10:05
Sulfate	< 5	mg/l			WG603173	07/18/12 10:05
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

\* Performance of this Analyte is outside of established criteria.

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July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

\* Performance of this Analyte is outside of established criteria.

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Sulfate	mg/l	450.	450.	0.222	20	L584127-05	WG603173
Sulfate	mg/l	24.0	24.0	0.416	20	L584127-09	WG603173
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Sulfate	mg/l	150.	150.	1.98	20	L584776-02	WG603173
Sulfate	mg/l	120.	120.	1.65	20	L584776-04	WG603173
Sulfate	mg/l	230.	230.	1.75	20	L584922-01	WG603173
Chloride	mg/l	640.	650.	1.86	20	L585014-01	WG603173
Sulfate	mg/l	540.	550.	1.47	20	L585014-01	WG603173
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226

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Quality Assurance Report  
Level II

L585014

July 29, 2012

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Boron,Dissolved	mg/l	0	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0	0.913	20	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0	0	20	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90	4.30	20	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10	0.491	20	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147	0	20	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720	NA	20	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340	NA	20	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50	1.19*	0	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550	NA	0	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0	0	20	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury, Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812
Chloride	mg/l	40	39.6	99.0	90-110	WG603173
Sulfate	mg/l	40	39.3	98.3	90-110	WG603173
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benztidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614

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826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585014

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

July 29, 2012

Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
Alkalinity	mg/l	110.	110.	110.		85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.		77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.		71-126	9.05	20	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.		78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.		81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.		53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0		73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.		54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.		67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.		77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.		68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.		77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.		76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.		77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0		55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.		78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.		77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.		77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.		69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.		76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.		69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.		75-114	9.16	20	WG602582
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.		63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.		69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.		69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.		53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.		55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.		77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5		82-120			WG602582
Dibromofluoromethane				102.7		82-126			WG602582
Toluene-d8				105.6		92-112			WG602582
Ethane	mg/l	0.732	0.736	114.		70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.		70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.		70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*		98-101	0	20	WG602929
Chloride	mg/l	39.7	39.6	99.0		90-110	0.252	20	WG603173
Sulfate	mg/l	39.3	39.3	98.0		90-110	0	20	WG603173
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.		85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.		85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0		18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0		12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0		10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0		19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0		10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0		30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0		32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0		29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0		16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0		14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0		42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0		10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0		40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0		14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0		39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0		10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0		37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0		34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0		48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0		10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0		46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0		39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0		39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0		42-181	1.28	30	WG602743

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Toluene-d8					104.8	92-112		
Mercury,Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812
Chloride	mg/l	65.4	6.50	50	118.	80-120	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128				WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20	L584961-16	WG602582

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20	L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16	WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16	WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16	WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16	WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16	WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16	WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16	WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16	WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16	WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16	WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16	WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16	WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16	WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16	WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16	WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16	WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16	WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16	WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16	WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16	WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16	WG602582
4-Bromofluorobenzene				104.2	82-120				WG602582
Dibromofluoromethane				104.6	82-126				WG602582
Toluene-d8				105.1	92-112				WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01	WG602812

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			Ref	%Rec					
Chloride	mg/l	66.4	65.4	120.	80-120	1.52	20	L583651-01	WG603173
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02	WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585014-01  
WG602670: R2256613: L585014-01  
WG602614: R2257834: L585014-01  
WG602809: R2257935: L585014-01  
WG602912: R2257953: L585014-01  
WG602917: R2257954: L585014-01  
WG602582: R2258253: L585014-01  
WG603037: R2258613: L585014-01  
WG602929: R2259213: L585014-01  
WG602812: R2260755: L585014-01  
WG603173: R2260933: L585014-01  
WG602923: R2261115: L585014-01  
WG603320: R2261675: L585014-01  
WG602743: R2262494: L585014-01  
WG603124: R2264154: L585014-01  
WG603226: R2264474: L585014-01  
WG604526: R2276876: L585014-01

\* \* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585014

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

July 29, 2012

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.

Environmental Science Corp.  
 Login Confirmation Report  
 Jul 15 2012, 08:03 am  
 Login Number: L585068 Template Number: N/A  
 Account: ENCANACO EnCana Oil & Gas Inc. - CO

Report To: Chris Hines / Matt Kasten	Client Project #: F12E PIPELINE SPILL	TSR:358
: 2717 County Road 215, Suite 100	Project Description:	Payment Terms: Net 30
:	PO#:	Regulatory State: CO
: Parachute, CO, 81635	PO# Required: N	Fax Report: N
Telephone #: 970-285-2653	Lab Project #: ENCANACO-910LIST	Quote#:
Fax #: 970-625-4636	Client Design: DEFAULT	Report Design:
Email: , christopher.hines@encana.com; mkasten@walshenv.com		

Project/Account Comments: Try not to report benzene as BDL above a 250x dilution.

ONLY log soil samples under this account. Waters get logged under ENCRCO. Log all PAHs as PAHSIM.

Lab Sample #	Test	Sample ID	Desc.	Collect Date & Time	Collected By	Site	Receive Date	PR	Est.DueDate(1)	Method	Unit Price
L585068-01		F12E PIPELINE SPILL SOIL		13-Jul-12, 10:45	Charlie	F12E	14-JUL-12	R5	20-JUL-12		
F12E Pipeline Spill											
SS	P BTEXGRO/DRO		BTEXGRO/DRO								\$ 60.00
SS	C BTEXGRO		BTEX/GRO	13713292		4ozClr-NoPres	DEFAULT		8021/8015		\$ 0.00
SS	C DRO		TPH High Fraction -DRO	13713294		4ozClr-NoPres	DEFAULT		8015M		\$ 0.00
SS	S CR3		Chromium,Trivalent	13713294		4ozClr-NoPres	DEFAULT		Calc.		\$ 0.00
SS	P CR6SS		Chromium-Hexavalent, pH and ORP								\$ 70.00
SS	C CR6		Chromium,Hexavalent	13713294		4ozClr-NoPres	DEFAULT		3060A/7196A		\$ 0.00
SS	C ORP		ORP	13713294		4ozClr-NoPres	DEFAULT		SM2580B		\$ 0.00
SS	C PH		pH	13713292		4ozClr-NoPres	DEFAULT		9045D		\$ 0.00
SS	S CUICP		Copper	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00
Misc	S DISPOSAL		Sample Disposal Charge								\$ 0.00
Misc	S ENERGY		Energy Surcharge								\$ 0.00
Misc	S HARDCOPY		Hardcopy Report Charge								\$ 0.00
SS	P MRCRA8		RCRA Metals								\$ 70.00
SS	C AGICP		Silver	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C ASICP		Arsenic	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C BAICP		Barium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C CDICP		Cadmium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C CRICP		Chromium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C HG		Mercury	13713292		4ozClr-NoPres	DEFAULT		7471A		\$ 0.00
SS	C PBICP		Lead by 6010B	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
SS	C SEICP		Selenium	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 0.00
Misc	S MTLPREP		Metals Prep Fee per Set								\$ 0.00
SS	S NIICP		Nickel	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00
Misc	S SAMPLEKIT		Sample Kit / Supplies Fee								\$ 0.00
SS	S SAR		Sodium Adsorption Ratio				DEFAULT		Calc.		\$ 40.00
Misc	S SHIPPING		Inbound Transport Charge								\$ 0.00
SS	S SPCON		Specific Conductance	13713294		4ozClr-NoPres	DEFAULT		9050AMod		\$ 10.00
SS	S SV8270PAHSIM		PAHs by SIM	13713293		4ozClr-NoPres	DEFAULT		8270C-SIM		\$ 65.00
SS	S ZNICP		Zinc	13713292		4ozClr-NoPres	DEFAULT		6010B		\$ 8.00

Not An Invoice! Do Not Pay

Total: \$ 339.00



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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Tuesday September 18, 2012

Report Number: L595515

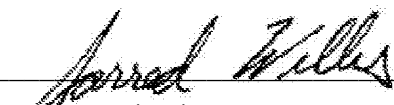
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 18, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHE1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:50

ESC Sample # : L595515-01

Site ID : SCHE1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	09/18/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/18/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/18/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromodichloromethane	0.0022	0.0010	mg/l	8260B	09/18/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/18/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/18/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/18/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/18/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/18/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/18/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/18/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/18/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/18/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/18/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/18/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/18/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 18, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHE1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:50

ESC Sample # : L595515-01

Site ID : SCHE1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/18/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/18/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/18/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/18/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/18/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/18/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/18/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/18/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/18/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/18/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/18/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/18/12	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	09/18/12	1
Dibromofluoromethane	102.		% Rec.	8260B	09/18/12	1
4-Bromofluorobenzene	95.3		% Rec.	8260B	09/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/18/12 11:09 Printed: 09/18/12 11:09

Summary of Remarks For Samples Printed  
09/18/12 at 11:09:51

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L595515-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/24/12 00:00 RPT Date: 09/18/12 11:09  
Relogged from L593525-01. VOCs go OOH on Wednesday, 9/19



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

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Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,1-Trichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2-Trichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
1,1-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,2,3-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,4-Trichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2,4-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG613116	09/17/12 22:26
1,2-Dibromoethane	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichloroethane	< .001	mg/l			WG613116	09/17/12 22:26
1,2-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,3,5-Trimethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,3-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
1,3-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
1,4-Dichlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
2,2-Dichloropropane	< .001	mg/l			WG613116	09/17/12 22:26
2-Butanone (MEK)	< .01	mg/l			WG613116	09/17/12 22:26
2-Chloroethyl vinyl ether	< .05	mg/l			WG613116	09/17/12 22:26
2-Chlorotoluene	< .001	mg/l			WG613116	09/17/12 22:26
4-Chlorotoluene	< .001	mg/l			WG613116	09/17/12 22:26
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG613116	09/17/12 22:26
Acetone	< .05	mg/l			WG613116	09/17/12 22:26
Acrolein	< .025	mg/l			WG613116	09/17/12 22:26
Acrylonitrile	< .01	mg/l			WG613116	09/17/12 22:26
Benzene	< .001	mg/l			WG613116	09/17/12 22:26
Bromobenzene	< .001	mg/l			WG613116	09/17/12 22:26
Bromodichloromethane	< .001	mg/l			WG613116	09/17/12 22:26
Bromoform	< .001	mg/l			WG613116	09/17/12 22:26
Bromomethane	< .005	mg/l			WG613116	09/17/12 22:26
Carbon tetrachloride	< .001	mg/l			WG613116	09/17/12 22:26
Chlorobenzene	< .001	mg/l			WG613116	09/17/12 22:26
Chlorodibromomethane	< .001	mg/l			WG613116	09/17/12 22:26
Chloroethane	< .005	mg/l			WG613116	09/17/12 22:26
Chloroform	< .005	mg/l			WG613116	09/17/12 22:26
Chloromethane	< .0025	mg/l			WG613116	09/17/12 22:26
cis-1,2-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
cis-1,3-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
Di-isopropyl ether	< .001	mg/l			WG613116	09/17/12 22:26
Dibromomethane	< .001	mg/l			WG613116	09/17/12 22:26
Dichlorodifluoromethane	< .005	mg/l			WG613116	09/17/12 22:26
Ethylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Hexachloro-1,3-butadiene	< .001	mg/l			WG613116	09/17/12 22:26
Isopropylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Methyl tert-butyl ether	< .001	mg/l			WG613116	09/17/12 22:26
Methylene Chloride	< .005	mg/l			WG613116	09/17/12 22:26
n-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
n-Propylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Naphthalene	< .005	mg/l			WG613116	09/17/12 22:26
p-Isopropyltoluene	< .001	mg/l			WG613116	09/17/12 22:26
sec-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26
Styrene	< .001	mg/l			WG613116	09/17/12 22:26
tert-Butylbenzene	< .001	mg/l			WG613116	09/17/12 22:26

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Quality Assurance Report  
Level II

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Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG613116	09/17/12 22:26
Toluene	< .005	mg/l			WG613116	09/17/12 22:26
trans-1,2-Dichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
trans-1,3-Dichloropropene	< .001	mg/l			WG613116	09/17/12 22:26
Trichloroethene	< .001	mg/l			WG613116	09/17/12 22:26
Trichlorofluoromethane	< .005	mg/l			WG613116	09/17/12 22:26
Vinyl chloride	< .001	mg/l			WG613116	09/17/12 22:26
Xylenes, Total	< .003	mg/l			WG613116	09/17/12 22:26
4-Bromofluorobenzene		% Rec.	102.9	82-120	WG613116	09/17/12 22:26
Dibromofluoromethane		% Rec.	100.3	82-126	WG613116	09/17/12 22:26
Toluene-d8		% Rec.	101.3	92-112	WG613116	09/17/12 22:26

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	114.	77-128	WG613116
1,1,1-Trichloroethane	mg/l	.025	0.0272	109.	71-126	WG613116
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0263	105.	78-130	WG613116
1,1,2-Trichloroethane	mg/l	.025	0.0261	105.	81-121	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0305	122.	53-143	WG613116
1,1-Dichloroethane	mg/l	.025	0.0257	103.	73-123	WG613116
1,1-Dichloroethene	mg/l	.025	0.0292	117.	54-134	WG613116
1,1-Dichloropropene	mg/l	.025	0.0259	103.	67-127	WG613116
1,2,3-Trichlorobenzene	mg/l	.025	0.0284	114.	77-130	WG613116
1,2,3-Trichloropropane	mg/l	.025	0.0293	117.	68-130	WG613116
1,2,3-Trimethylbenzene	mg/l	.025	0.0265	106.	77-126	WG613116
1,2,4-Trichlorobenzene	mg/l	.025	0.0280	112.	76-127	WG613116
1,2,4-Trimethylbenzene	mg/l	.025	0.0281	112.	77-129	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0248	99.1	55-142	WG613116
1,2-Dibromoethane	mg/l	.025	0.0263	105.	78-124	WG613116
1,2-Dichlorobenzene	mg/l	.025	0.0270	108.	82-121	WG613116
1,2-Dichloroethane	mg/l	.025	0.0252	101.	69-128	WG613116
1,2-Dichloropropane	mg/l	.025	0.0242	97.0	77-121	WG613116
1,3,5-Trimethylbenzene	mg/l	.025	0.0281	112.	78-127	WG613116
1,3-Dichlorobenzene	mg/l	.025	0.0289	116.	77-127	WG613116
1,3-Dichloropropane	mg/l	.025	0.0244	97.5	78-117	WG613116
1,4-Dichlorobenzene	mg/l	.025	0.0255	102.	79-117	WG613116
2,2-Dichloropropane	mg/l	.025	0.0293	117.	63-130	WG613116
2-Butanone (MEK)	mg/l	.125	0.133	107.	58-144	WG613116
2-Chloroethyl vinyl ether	mg/l	.125	0.110	88.0	26-172	WG613116
2-Chlorotoluene	mg/l	.025	0.0272	109.	78-123	WG613116
4-Chlorotoluene	mg/l	.025	0.0278	111.	78-122	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.127	101.	58-147	WG613116
Acetone	mg/l	.125	0.132	106.	49-153	WG613116
Acrolein	mg/l	.125	0.125	99.8	10-181	WG613116
Acrylonitrile	mg/l	.125	0.126	101.	53-153	WG613116
Benzene	mg/l	.025	0.0241	96.5	72-119	WG613116
Bromobenzene	mg/l	.025	0.0272	109.	76-121	WG613116
Bromodichloromethane	mg/l	.025	0.0265	106.	75-127	WG613116
Bromoform	mg/l	.025	0.0284	114.	61-136	WG613116
Bromomethane	mg/l	.025	0.0301	121.	42-172	WG613116
Carbon tetrachloride	mg/l	.025	0.0267	107.	63-129	WG613116
Chlorobenzene	mg/l	.025	0.0264	106.	78-123	WG613116
Chlorodibromomethane	mg/l	.025	0.0268	107.	73-128	WG613116
Chloroethane	mg/l	.025	0.0273	109.	52-164	WG613116
Chloroform	mg/l	.025	0.0267	107.	76-122	WG613116
Chloromethane	mg/l	.025	0.0240	95.8	50-141	WG613116
cis-1,2-Dichloroethene	mg/l	.025	0.0257	103.	75-121	WG613116
cis-1,3-Dichloropropene	mg/l	.025	0.0251	101.	74-124	WG613116

\* 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**

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

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

Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Di-isopropyl ether	mg/l	.025	0.0238	95.1	66-129	WG613116
Dibromomethane	mg/l	.025	0.0266	106.	77-124	WG613116
Dichlorodifluoromethane	mg/l	.025	0.0278	111.	33-173	WG613116
Ethylbenzene	mg/l	.025	0.0272	109.	77-124	WG613116
Hexachloro-1,3-butadiene	mg/l	.025	0.0289	116.	71-134	WG613116
Isopropylbenzene	mg/l	.025	0.0276	110.	74-126	WG613116
Methyl tert-butyl ether	mg/l	.025	0.0257	103.	67-127	WG613116
Methylene Chloride	mg/l	.025	0.0240	96.1	67-122	WG613116
n-Butylbenzene	mg/l	.025	0.0277	111.	74-130	WG613116
n-Propylbenzene	mg/l	.025	0.0275	110.	77-125	WG613116
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG613116
p-Isopropyltoluene	mg/l	.025	0.0304	121.	77-132	WG613116
sec-Butylbenzene	mg/l	.025	0.0279	111.	77-130	WG613116
Styrene	mg/l	.025	0.0280	112.	69-145	WG613116
tert-Butylbenzene	mg/l	.025	0.0299	119.	76-131	WG613116
Tetrachloroethene	mg/l	.025	0.0257	103.	69-131	WG613116
Toluene	mg/l	.025	0.0233	93.2	75-114	WG613116
trans-1,2-Dichloroethene	mg/l	.025	0.0270	108.	63-127	WG613116
trans-1,3-Dichloropropene	mg/l	.025	0.0261	104.	69-124	WG613116
Trichloroethene	mg/l	.025	0.0249	99.6	69-131	WG613116
Trichlorofluoromethane	mg/l	.025	0.0289	116.	53-161	WG613116
Vinyl chloride	mg/l	.025	0.0270	108.	55-142	WG613116
Xylenes, Total	mg/l	.075	0.0802	107.	77-123	WG613116
4-Bromofluorobenzene				101.3	82-120	WG613116
Dibromofluoromethane				102.8	82-126	WG613116
Toluene-d8				99.93	92-112	WG613116

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,1,2-Tetrachloroethane	mg/l	0.0292	0.0286	117.	77-128	2.16	20	WG613116
1,1,1-Trichloroethane	mg/l	0.0257	0.0272	103.	71-126	5.56	20	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0275	0.0263	110.	78-130	4.73	20	WG613116
1,1,2-Trichloroethane	mg/l	0.0285	0.0261	114.	81-121	8.73	20	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0285	0.0305	114.	53-143	6.59	20	WG613116
1,1-Dichloroethane	mg/l	0.0249	0.0257	100.	73-123	3.17	20	WG613116
1,1-Dichloroethene	mg/l	0.0274	0.0292	110.	54-134	6.37	20	WG613116
1,1-Dichloropropene	mg/l	0.0236	0.0259	94.0	67-127	9.07	20	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0282	0.0284	113.	77-130	0.870	20	WG613116
1,2,3-Trichloropropane	mg/l	0.0295	0.0293	118.	68-130	0.620	20	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0259	0.0265	104.	77-126	2.41	20	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0281	0.0280	112.	76-127	0.520	20	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0290	0.0281	116.	77-129	3.26	20	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0248	106.	55-142	6.46	20	WG613116
1,2-Dibromoethane	mg/l	0.0278	0.0263	111.	78-124	5.38	20	WG613116
1,2-Dichlorobenzene	mg/l	0.0269	0.0270	108.	82-121	0.500	20	WG613116
1,2-Dichloroethane	mg/l	0.0245	0.0252	98.0	69-128	2.79	20	WG613116
1,2-Dichloropropane	mg/l	0.0236	0.0242	94.0	77-121	2.55	20	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0290	0.0281	116.	78-127	3.28	20	WG613116
1,3-Dichlorobenzene	mg/l	0.0293	0.0289	117.	77-127	1.23	20	WG613116
1,3-Dichloropropane	mg/l	0.0254	0.0244	102.	78-117	4.16	20	WG613116
1,4-Dichlorobenzene	mg/l	0.0245	0.0255	98.0	79-117	3.70	20	WG613116
2,2-Dichloropropane	mg/l	0.0272	0.0293	109.	63-130	7.23	20	WG613116
2-Butanone (MEK)	mg/l	0.126	0.133	101.	58-144	5.29	20	WG613116
2-Chloroethyl vinyl ether	mg/l	0.105	0.110	84.0	26-172	4.92	22	WG613116
2-Chlorotoluene	mg/l	0.0286	0.0272	114.	78-123	5.09	20	WG613116
4-Chlorotoluene	mg/l	0.0282	0.0278	113.	78-122	1.54	20	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.128	0.127	102.	58-147	1.03	20	WG613116
Acetone	mg/l	0.130	0.132	104.	49-153	1.59	21	WG613116

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
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Quality Assurance Report  
Level II

L595515

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acrolein	mg/l	0.124	0.125	99.0	10-181	0.640	30	WG613116
Acrylonitrile	mg/l	0.127	0.126	101.	53-153	0.280	20	WG613116
Benzene	mg/l	0.0235	0.0241	94.0	72-119	2.82	20	WG613116
Bromobenzene	mg/l	0.0276	0.0272	110.	76-121	1.55	20	WG613116
Bromodichloromethane	mg/l	0.0253	0.0265	101.	75-127	4.77	20	WG613116
Bromoform	mg/l	0.0305	0.0284	122.	61-136	6.99	20	WG613116
Bromomethane	mg/l	0.0276	0.0301	110.	42-172	8.65	20	WG613116
Carbon tetrachloride	mg/l	0.0234	0.0267	93.0	63-129	13.3	20	WG613116
Chlorobenzene	mg/l	0.0270	0.0264	108.	78-123	1.96	20	WG613116
Chlorodibromomethane	mg/l	0.0282	0.0268	113.	73-128	5.07	20	WG613116
Chloroethane	mg/l	0.0265	0.0273	106.	52-164	2.83	20	WG613116
Chloroform	mg/l	0.0257	0.0267	103.	76-122	3.75	20	WG613116
Chloromethane	mg/l	0.0232	0.0240	93.0	50-141	3.21	20	WG613116
cis-1,2-Dichloroethene	mg/l	0.0245	0.0257	98.0	75-121	4.64	20	WG613116
cis-1,3-Dichloropropene	mg/l	0.0248	0.0251	99.0	74-124	1.57	20	WG613116
Di-isopropyl ether	mg/l	0.0227	0.0238	91.0	66-129	4.77	20	WG613116
Dibromomethane	mg/l	0.0264	0.0266	105.	77-124	0.960	20	WG613116
Dichlorodifluoromethane	mg/l	0.0268	0.0278	107.	33-173	3.66	20	WG613116
Ethylbenzene	mg/l	0.0269	0.0272	107.	77-124	1.16	20	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0277	0.0289	111.	71-134	4.55	20	WG613116
Isopropylbenzene	mg/l	0.0282	0.0276	113.	74-126	2.25	20	WG613116
Methyl tert-butyl ether	mg/l	0.0254	0.0257	102.	67-127	1.12	20	WG613116
Methylene Chloride	mg/l	0.0235	0.0240	94.0	67-122	2.26	20	WG613116
n-Butylbenzene	mg/l	0.0263	0.0277	105.	74-130	5.04	20	WG613116
n-Propylbenzene	mg/l	0.0281	0.0275	112.	77-125	2.18	20	WG613116
Naphthalene	mg/l	0.0264	0.0263	105.	70-134	0.180	20	WG613116
p-Isopropyltoluene	mg/l	0.0306	0.0304	122.	77-132	0.680	20	WG613116
sec-Butylbenzene	mg/l	0.0289	0.0279	115.	77-130	3.47	20	WG613116
Styrene	mg/l	0.0283	0.0280	113.	69-145	1.05	20	WG613116
tert-Butylbenzene	mg/l	0.0295	0.0299	118.	76-131	1.06	20	WG613116
Tetrachloroethene	mg/l	0.0272	0.0257	109.	69-131	5.64	20	WG613116
Toluene	mg/l	0.0229	0.0233	92.0	75-114	1.67	20	WG613116
trans-1,2-Dichloroethene	mg/l	0.0260	0.0270	104.	63-127	3.57	20	WG613116
trans-1,3-Dichloropropene	mg/l	0.0269	0.0261	108.	69-124	2.93	20	WG613116
Trichloroethene	mg/l	0.0239	0.0249	95.0	69-131	4.24	20	WG613116
Trichlorofluoromethane	mg/l	0.0270	0.0289	108.	53-161	7.05	20	WG613116
Vinyl chloride	mg/l	0.0257	0.0270	103.	55-142	4.69	20	WG613116
Xylenes, Total	mg/l	0.0821	0.0802	110.	77-123	2.36	20	WG613116
4-Bromofluorobenzene				108.4	82-120			WG613116
Dibromofluoromethane				100.4	82-126			WG613116
Toluene-d8				100.8	92-112			WG613116

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0266	0	.025	106.	71-130	L595452-05	WG613116
1,1,1-Trichloroethane	mg/l	0.0261	0	.025	104.	58-137	L595452-05	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0266	0.000644	.025	104.	64-149	L595452-05	WG613116
1,1,2-Trichloroethane	mg/l	0.0249	0	.025	99.5	73-128	L595452-05	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0303	0	.025	121.	36-159	L595452-05	WG613116
1,1-Dichloroethane	mg/l	0.0249	0	.025	99.7	58-133	L595452-05	WG613116
1,1-Dichloroethene	mg/l	0.0287	0	.025	115.	32-152	L595452-05	WG613116
1,1-Dichloropropene	mg/l	0.0240	0	.025	95.9	50-140	L595452-05	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0271	0	.025	108.	68-135	L595452-05	WG613116
1,2,3-Trichloropropane	mg/l	0.0292	0	.025	117.	74-137	L595452-05	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0285	0.00310	.025	102.	67-133	L595452-05	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0272	0	.025	109.	67-133	L595452-05	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0271	0.000680	.025	105.	62-141	L595452-05	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0302	0.00288	.025	109.	55-148	L595452-05	WG613116

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Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dibromoethane	mg/l	0.0252	0	.025	101.	71-129	L595452-05	WG613116
1,2-Dichlorobenzene	mg/l	0.0259	0	.025	103.	75-125	L595452-05	WG613116
1,2-Dichloroethane	mg/l	0.0245	0	.025	98.2	59-135	L595452-05	WG613116
1,2-Dichloropropane	mg/l	0.0238	0	.025	95.3	68-126	L595452-05	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0262	0	.025	105.	67-136	L595452-05	WG613116
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L595452-05	WG613116
1,3-Dichloropropane	mg/l	0.0228	0	.025	91.4	70-122	L595452-05	WG613116
1,4-Dichlorobenzene	mg/l	0.0240	0	.025	96.2	70-123	L595452-05	WG613116
2,2-Dichloropropane	mg/l	0.0280	0	.025	112.	51-141	L595452-05	WG613116
2-Butanone (MEK)	mg/l	0.0933	0	.125	74.6	51-149	L595452-05	WG613116
2-Chloroethyl vinyl ether	mg/l	0	0	.125	0*	10-161	L595452-05	WG613116
2-Chlorotoluene	mg/l	0.0259	0	.025	104.	65-133	L595452-05	WG613116
4-Chlorotoluene	mg/l	0.0261	0.000314	.025	103.	67-129	L595452-05	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.130	0	.125	104.	53-154	L595452-05	WG613116
Acetone	mg/l	0.0634	0.00307	.125	48.3	34-146	L595452-05	WG613116
Acrolein	mg/l	0.108	0	.125	86.3	10-189	L595452-05	WG613116
Acrylonitrile	mg/l	0.127	0	.125	101.	49-162	L595452-05	WG613116
Benzene	mg/l	0.0234	0.000510	.025	91.5	51-134	L595452-05	WG613116
Bromobenzene	mg/l	0.0252	0.000697	.025	98.1	64-130	L595452-05	WG613116
Bromodichloromethane	mg/l	0.0247	0	.025	98.8	67-132	L595452-05	WG613116
Bromoform	mg/l	0.0274	0	.025	110.	59-137	L595452-05	WG613116
Bromomethane	mg/l	0.0255	0	.025	102.	23-177	L595452-05	WG613116
Carbon tetrachloride	mg/l	0.0247	0	.025	98.9	49-140	L595452-05	WG613116
Chlorobenzene	mg/l	0.0247	0	.025	99.0	69-126	L595452-05	WG613116
Chlorodibromomethane	mg/l	0.0261	0	.025	104.	68-130	L595452-05	WG613116
Chloroethane	mg/l	0.0254	0	.025	102.	32-177	L595452-05	WG613116
Chloroform	mg/l	0.0246	0	.025	98.5	64-130	L595452-05	WG613116
Chloromethane	mg/l	0.0227	0	.025	90.7	27-155	L595452-05	WG613116
cis-1,2-Dichloroethene	mg/l	0.0239	0	.025	95.4	54-137	L595452-05	WG613116
cis-1,3-Dichloropropene	mg/l	0.0236	0	.025	94.6	63-127	L595452-05	WG613116
Di-isopropyl ether	mg/l	0.0227	0	.025	90.6	58-133	L595452-05	WG613116
Dibromomethane	mg/l	0.0258	0	.025	103.	68-131	L595452-05	WG613116
Dichlorodifluoromethane	mg/l	0.0272	0	.025	109.	16-188	L595452-05	WG613116
Ethylbenzene	mg/l	0.0340	0.00790	.025	104.	64-135	L595452-05	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0273	0	.025	109.	64-140	L595452-05	WG613116
Isopropylbenzene	mg/l	0.0290	0.00220	.025	107.	62-134	L595452-05	WG613116
Methyl tert-butyl ether	mg/l	0.0250	0	.025	100.	55-136	L595452-05	WG613116
Methylene Chloride	mg/l	0.0218	0	.025	87.1	52-130	L595452-05	WG613116
n-Butylbenzene	mg/l	0.0271	0.000816	.025	105.	62-142	L595452-05	WG613116
n-Propylbenzene	mg/l	0.0329	0.00661	.025	105.	62-137	L595452-05	WG613116
Naphthalene	mg/l	0.0392	0.0120	.025	109.	65-140	L595452-05	WG613116
p-Isopropyltoluene	mg/l	0.0281	0	.025	112.	64-142	L595452-05	WG613116
sec-Butylbenzene	mg/l	0.0277	0.00107	.025	106.	67-139	L595452-05	WG613116
Styrene	mg/l	0.0260	0	.025	104.	58-152	L595452-05	WG613116
tert-Butylbenzene	mg/l	0.0274	0	.025	110.	66-139	L595452-05	WG613116
Tetrachloroethene	mg/l	0.0245	0	.025	97.9	56-139	L595452-05	WG613116
Toluene	mg/l	0.0231	0	.025	92.3	61-126	L595452-05	WG613116
trans-1,2-Dichloroethene	mg/l	0.0257	0	.025	103.	45-137	L595452-05	WG613116
trans-1,3-Dichloropropene	mg/l	0.0257	0.000633	.025	100.	59-130	L595452-05	WG613116
Trichloroethene	mg/l	0.0236	0	.025	94.3	40-155	L595452-05	WG613116
Trichlorofluoromethane	mg/l	0.0281	0	.025	112.	35-177	L595452-05	WG613116
Vinyl chloride	mg/l	0.0249	0	.025	99.6	32-159	L595452-05	WG613116
Xylenes, Total	mg/l	0.0761	0	.075	101.	64-133	L595452-05	WG613116
4-Bromofluorobenzene					101.9	82-120		WG613116
Dibromofluoromethane					101.6	82-126		WG613116
Toluene-d8					99.82	92-112		WG613116

\* 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

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L595515

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

September 18, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0266	112.	71-130	5.38	20	L595452-05	WG613116
1,1,1-Trichloroethane	mg/l	0.0260	0.0261	104.	58-137	0.570	20	L595452-05	WG613116
1,1,2,2-Tetrachloroethane	mg/l	0.0271	0.0266	106.	64-149	1.95	20	L595452-05	WG613116
1,1,2-Trichloroethane	mg/l	0.0263	0.0249	105.	73-128	5.48	20	L595452-05	WG613116
1,1,2-Trichlorotrifluoroethane	mg/l	0.0283	0.0303	113.	36-159	6.59	21	L595452-05	WG613116
1,1-Dichloroethane	mg/l	0.0237	0.0249	94.9	58-133	4.90	20	L595452-05	WG613116
1,1-Dichloroethene	mg/l	0.0282	0.0287	113.	32-152	1.99	20	L595452-05	WG613116
1,1-Dichloropropene	mg/l	0.0234	0.0240	93.7	50-140	2.31	20	L595452-05	WG613116
1,2,3-Trichlorobenzene	mg/l	0.0275	0.0271	110.	68-135	1.21	20	L595452-05	WG613116
1,2,3-Trichloropropane	mg/l	0.0282	0.0292	113.	74-137	3.40	20	L595452-05	WG613116
1,2,3-Trimethylbenzene	mg/l	0.0286	0.0285	102.	67-133	0.270	20	L595452-05	WG613116
1,2,4-Trichlorobenzene	mg/l	0.0270	0.0272	108.	67-133	0.640	20	L595452-05	WG613116
1,2,4-Trimethylbenzene	mg/l	0.0285	0.0271	111.	62-141	5.15	20	L595452-05	WG613116
1,2-Dibromo-3-Chloropropane	mg/l	0.0332	0.0302	121.	55-148	9.39	22	L595452-05	WG613116
1,2-Dibromoethane	mg/l	0.0263	0.0252	105.	71-129	4.30	20	L595452-05	WG613116
1,2-Dichlorobenzene	mg/l	0.0275	0.0259	110.	75-125	6.20	20	L595452-05	WG613116
1,2-Dichloroethane	mg/l	0.0243	0.0245	97.3	59-135	0.860	20	L595452-05	WG613116
1,2-Dichloropropane	mg/l	0.0225	0.0238	90.0	68-126	5.72	20	L595452-05	WG613116
1,3,5-Trimethylbenzene	mg/l	0.0269	0.0262	107.	67-136	2.48	20	L595452-05	WG613116
1,3-Dichlorobenzene	mg/l	0.0272	0.0266	109.	69-131	2.24	20	L595452-05	WG613116
1,3-Dichloropropane	mg/l	0.0242	0.0228	96.8	70-122	5.79	20	L595452-05	WG613116
1,4-Dichlorobenzene	mg/l	0.0242	0.0240	96.8	70-123	0.610	20	L595452-05	WG613116
2,2-Dichloropropane	mg/l	0.0271	0.0280	108.	51-141	3.43	20	L595452-05	WG613116
2-Butanone (MEK)	mg/l	0.0910	0.0933	72.8	51-149	2.45	22	L595452-05	WG613116
2-Chloroethyl vinyl ether	mg/l	0	0	0*	10-161	0	40	L595452-05	WG613116
2-Chlorotoluene	mg/l	0.0268	0.0259	107.	65-133	3.10	20	L595452-05	WG613116
4-Chlorotoluene	mg/l	0.0272	0.0261	108.	67-129	3.96	20	L595452-05	WG613116
4-Methyl-2-pentanone (MIBK)	mg/l	0.126	0.130	101.	53-154	2.89	21	L595452-05	WG613116
Acetone	mg/l	0.0621	0.0634	47.2	34-146	2.15	22	L595452-05	WG613116
Acrolein	mg/l	0.109	0.108	87.3	10-189	1.13	30	L595452-05	WG613116
Acrylonitrile	mg/l	0.126	0.127	100.	49-162	0.780	20	L595452-05	WG613116
Benzene	mg/l	0.0232	0.0234	90.6	51-134	0.910	20	L595452-05	WG613116
Bromobenzene	mg/l	0.0264	0.0252	103.	64-130	4.68	20	L595452-05	WG613116
Bromodichloromethane	mg/l	0.0248	0.0247	99.2	67-132	0.400	20	L595452-05	WG613116
Bromoform	mg/l	0.0279	0.0274	112.	59-137	1.78	20	L595452-05	WG613116
Bromomethane	mg/l	0.0264	0.0255	105.	23-177	3.20	21	L595452-05	WG613116
Carbon tetrachloride	mg/l	0.0250	0.0247	99.9	49-140	0.980	20	L595452-05	WG613116
Chlorobenzene	mg/l	0.0254	0.0247	102.	69-126	2.56	20	L595452-05	WG613116
Chlorodibromomethane	mg/l	0.0273	0.0261	109.	68-130	4.62	20	L595452-05	WG613116
Chloroethane	mg/l	0.0248	0.0254	99.0	32-177	2.52	21	L595452-05	WG613116
Chloroform	mg/l	0.0242	0.0246	96.7	64-130	1.80	20	L595452-05	WG613116
Chloromethane	mg/l	0.0221	0.0227	88.4	27-155	2.48	20	L595452-05	WG613116
cis-1,2-Dichloroethene	mg/l	0.0238	0.0239	95.2	54-137	0.280	20	L595452-05	WG613116
cis-1,3-Dichloropropene	mg/l	0.0237	0.0236	94.7	63-127	0.130	20	L595452-05	WG613116
Di-isopropyl ether	mg/l	0.0224	0.0227	89.5	58-133	1.27	20	L595452-05	WG613116
Dibromomethane	mg/l	0.0258	0.0258	103.	68-131	0.0800	20	L595452-05	WG613116
Dichlorodifluoromethane	mg/l	0.0269	0.0272	108.	16-188	0.960	22	L595452-05	WG613116
Ethylbenzene	mg/l	0.0351	0.0340	109.	64-135	3.04	20	L595452-05	WG613116
Hexachloro-1,3-butadiene	mg/l	0.0253	0.0273	101.	64-140	7.63	20	L595452-05	WG613116
Isopropylbenzene	mg/l	0.0299	0.0290	111.	62-134	3.08	20	L595452-05	WG613116
Methyl tert-butyl ether	mg/l	0.0248	0.0250	99.2	55-136	0.880	20	L595452-05	WG613116
Methylene Chloride	mg/l	0.0219	0.0218	87.4	52-130	0.390	20	L595452-05	WG613116
n-Butylbenzene	mg/l	0.0268	0.0271	104.	62-142	1.32	20	L595452-05	WG613116
n-Propylbenzene	mg/l	0.0340	0.0329	110.	62-137	3.17	20	L595452-05	WG613116
Naphthalene	mg/l	0.0407	0.0392	115.	65-140	3.65	20	L595452-05	WG613116
p-Isopropyltoluene	mg/l	0.0281	0.0281	112.	64-142	0.0100	20	L595452-05	WG613116
sec-Butylbenzene	mg/l	0.0282	0.0277	108.	67-139	1.95	20	L595452-05	WG613116
Styrene	mg/l	0.0263	0.0260	105.	58-152	1.15	20	L595452-05	WG613116
tert-Butylbenzene	mg/l	0.0283	0.0274	113.	66-139	2.94	20	L595452-05	WG613116
Tetrachloroethene	mg/l	0.0249	0.0245	99.7	56-139	1.81	20	L595452-05	WG613116

\* Performance of this Analyte is outside of established criteria.

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





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 Level II

L595515

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 1-800-767-5859  
 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 18, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Toluene	mg/l	0.0222	0.0231	89.0	61-126	3.68	20	L595452-05	WG613116
trans-1,2-Dichloroethene	mg/l	0.0249	0.0257	99.6	45-137	3.11	20	L595452-05	WG613116
trans-1,3-Dichloropropene	mg/l	0.0244	0.0257	95.1	59-130	5.27	20	L595452-05	WG613116
Trichloroethene	mg/l	0.0235	0.0236	93.8	40-155	0.520	20	L595452-05	WG613116
Trichlorofluoromethane	mg/l	0.0276	0.0281	110.	35-177	1.82	23	L595452-05	WG613116
Vinyl chloride	mg/l	0.0248	0.0249	99.3	32-159	0.370	21	L595452-05	WG613116
Xylenes, Total	mg/l	0.0771	0.0761	103.	64-133	1.29	20	L595452-05	WG613116
4-Bromofluorobenzene				102.8	82-120				WG613116
Dibromofluoromethane				99.65	82-126				WG613116
Toluene-d8				98.47	92-112				WG613116

Batch number /Run number / Sample number cross reference

WG613116: R2350435: L595515-01

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

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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.



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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Wednesday September 19, 2012

Report Number: L594224

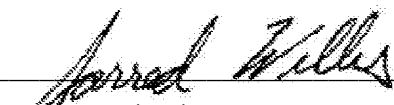
Samples Received: 09/11/12

Client Project: F12E POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/14/12	1
Chloride	74.	1.0	mg/l	9056	09/14/12	1
Fluoride	0.46	0.10	mg/l	9056	09/14/12	1
Sulfate	1500	250	mg/l	9056	09/15/12	50
Alkalinity	450	100	mg/l	2320B	09/13/12	5
Alkalinity,Bicarbonate	450	20.	mg/l	2320B	09/13/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/13/12	1
Methane	BDL	0.010	mg/l	RSK175	09/13/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/13/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/13/12	1
pH	7.5		su	9040C	09/14/12	1
Specific Conductance	3000		umhos/cm	9050A	09/16/12	1
TOC (Total Organic Carbon)	5.4	1.0	mg/l	9060A	09/13/12	1
Dissolved Solids	2600	10.	mg/l	2540C	09/18/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/17/12	1
Arsenic,Dissolved	0.0015	0.0010	mg/l	200.8	09/17/12	1
Molybdenum,Dissolved	0.0037	0.0020	mg/l	200.8	09/17/12	1
Selenium,Dissolved	0.0072	0.0010	mg/l	200.8	09/17/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/17/12	1
Barium,Dissolved	0.012	0.0050	mg/l	200.7	09/17/12	1
Boron,Dissolved	0.37	0.20	mg/l	200.7	09/17/12	1
Calcium,Dissolved	270	0.50	mg/l	200.7	09/17/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/17/12	1
Lithium,Dissolved	0.048	0.016	mg/l	200.7	09/19/12	1.1
Magnesium,Dissolved	170	0.10	mg/l	200.7	09/17/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/17/12	1
Potassium,Dissolved	6.6	0.50	mg/l	200.7	09/17/12	1
Silicon,Dissolved	5.2	0.20	mg/l	200.7	09/17/12	1
Sodium,Dissolved	250	0.50	mg/l	200.7	09/17/12	1
Strontium,Dissolved	6.4	0.010	mg/l	200.7	09/17/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/17/12	1
Zinc,Dissolved	0.31	0.030	mg/l	200.7	09/17/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/11/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0		% Rec.	8015D/GRO	09/11/12	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	09/12/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/12/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/12/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/12/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/12/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/12/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/12/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/12/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/12/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/12/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/12/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/12/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/12/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/12/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/12/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/12/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/12/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/12/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/12/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/12/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/12/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/12/12	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	09/12/12	1
Dibromofluoromethane	107.		% Rec.	8260B	09/12/12	1
4-Bromofluorobenzene	101.		% Rec.	8260B	09/12/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/14/12	1
Surrogate recovery(%)						
o-Terphenyl	103.		% Rec.	3511/8015	09/14/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/16/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/16/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/16/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/16/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/16/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/16/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/16/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/16/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/16/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L594224-01 (PH) - 7.5@18.6c



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

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 19, 2012

Date Received : September 11, 2012  
Description : F12 POLY RELEASE

Sample ID : GUTH1WW-091012

Collected By : Aaron Stacy  
Collection Date : 09/10/12 10:00

ESC Sample # : L594224-01

Site ID : F 12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/16/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/16/12	1
Surrogate Recovery						
2-Fluorophenol	64.0		% Rec.	8270 C	09/16/12	1
Phenol-d5	48.6		% Rec.	8270 C	09/16/12	1
Nitrobenzene-d5	90.5		% Rec.	8270 C	09/16/12	1
2-Fluorobiphenyl	103.		% Rec.	8270 C	09/16/12	1
2,4,6-Tribromophenol	78.8		% Rec.	8270 C	09/16/12	1
p-Terphenyl-d14	109.		% Rec.	8270 C	09/16/12	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.

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Reported: 09/19/12 13:10 Printed: 09/19/12 13:11

L594224-01 (PH) - 7.5@18.6c



Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L594224-01	WG612480	SAMP	pH	R2346693	T8
	WG612248	SAMP	Alkalinity	R2344113	J6
	WG611956	SAMP	Acetone	R2341093	J4
	WG611956	SAMP	2-Chloroethyl vinyl ether	R2341093	J6

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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  
09/19/12 at 13:11:09

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L594224-01 Account: ENCRCO Received: 09/11/12 09:00 Due Date: 09/18/12 00:00 RPT Date: 09/19/12 13:10  
Added HGD and SIDICP. Deleted HG. Per JW. AV 9/14



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611964	09/11/12 11:58
a,a,a-Trifluorotoluene(FID)		% Rec.	99.42	62-128	WG611964	09/11/12 11:58
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,1-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
1,1-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,2,3-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2,4-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611956	09/12/12 02:13
1,2-Dibromoethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloroethane	< .001	mg/l			WG611956	09/12/12 02:13
1,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,3,5-Trimethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
1,3-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
1,4-Dichlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
2,2-Dichloropropane	< .001	mg/l			WG611956	09/12/12 02:13
2-Butanone (MEK)	< .01	mg/l			WG611956	09/12/12 02:13
2-Chloroethyl vinyl ether	< .05	mg/l			WG611956	09/12/12 02:13
2-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Chlorotoluene	< .001	mg/l			WG611956	09/12/12 02:13
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611956	09/12/12 02:13
Acetone	< .05	mg/l			WG611956	09/12/12 02:13
Acrolein	< .025	mg/l			WG611956	09/12/12 02:13
Acrylonitrile	< .01	mg/l			WG611956	09/12/12 02:13
Benzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Bromodichloromethane	< .001	mg/l			WG611956	09/12/12 02:13
Bromoform	< .001	mg/l			WG611956	09/12/12 02:13
Bromomethane	< .005	mg/l			WG611956	09/12/12 02:13
Carbon tetrachloride	< .001	mg/l			WG611956	09/12/12 02:13
Chlorobenzene	< .001	mg/l			WG611956	09/12/12 02:13
Chlorodibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Chloroethane	< .005	mg/l			WG611956	09/12/12 02:13
Chloroform	< .005	mg/l			WG611956	09/12/12 02:13
Chloromethane	< .0025	mg/l			WG611956	09/12/12 02:13
cis-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
cis-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Di-isopropyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Dibromomethane	< .001	mg/l			WG611956	09/12/12 02:13
Dichlorodifluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Ethylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Hexachloro-1,3-butadiene	< .001	mg/l			WG611956	09/12/12 02:13
Isopropylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Methyl tert-butyl ether	< .001	mg/l			WG611956	09/12/12 02:13
Methylene Chloride	< .005	mg/l			WG611956	09/12/12 02:13
n-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
n-Propylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Naphthalene	< .005	mg/l			WG611956	09/12/12 02:13

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
p-Isopropyltoluene	< .001	mg/l			WG611956	09/12/12 02:13
sec-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Styrene	< .001	mg/l			WG611956	09/12/12 02:13
tert-Butylbenzene	< .001	mg/l			WG611956	09/12/12 02:13
Tetrachloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Toluene	< .005	mg/l			WG611956	09/12/12 02:13
trans-1,2-Dichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
trans-1,3-Dichloropropene	< .001	mg/l			WG611956	09/12/12 02:13
Trichloroethene	< .001	mg/l			WG611956	09/12/12 02:13
Trichlorofluoromethane	< .005	mg/l			WG611956	09/12/12 02:13
Vinyl chloride	< .001	mg/l			WG611956	09/12/12 02:13
Xylenes, Total	< .003	mg/l			WG611956	09/12/12 02:13
4-Bromofluorobenzene		% Rec.	99.13	82-120	WG611956	09/12/12 02:13
Dibromofluoromethane		% Rec.	104.3	82-126	WG611956	09/12/12 02:13
Toluene-d8		% Rec.	103.7	92-112	WG611956	09/12/12 02:13
Mercury	< .0002	mg/l			WG611975	09/12/12 11:29
Ethane	< .013	mg/l			WG612418	09/13/12 13:12
Ethene	< .013	mg/l			WG612418	09/13/12 13:12
Methane	< .01	mg/l			WG612418	09/13/12 13:12
Alkalinity	< 20	mg/l			WG612248	09/13/12 10:21
TOC (Total Organic Carbon)	< 1	mg/l			WG612253	09/13/12 09:27
Bromide	< 1	mg/l			WG612172	09/14/12 21:43
Chloride	< 1	mg/l			WG612172	09/14/12 21:43
Fluoride	< .1	mg/l			WG612172	09/14/12 21:43
Sulfate	< 5	mg/l			WG612172	09/14/12 21:43
1,2,4-Trichlorobenzene	< .01	mg/l			WG612335	09/16/12 12:43
2,4,6-Trichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dichlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dimethylphenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
2,4-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2,6-Dinitrotoluene	< .01	mg/l			WG612335	09/16/12 12:43
2-Chloronaphthalene	< .001	mg/l			WG612335	09/16/12 12:43
2-Chlorophenol	< .01	mg/l			WG612335	09/16/12 12:43
2-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
3,3-Dichlorobenzidine	< .01	mg/l			WG612335	09/16/12 12:43
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Bromophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Chloro-3-methylphenol	< .01	mg/l			WG612335	09/16/12 12:43
4-Chlorophenyl-phenylether	< .01	mg/l			WG612335	09/16/12 12:43
4-Nitrophenol	< .01	mg/l			WG612335	09/16/12 12:43
Acenaphthene	< .001	mg/l			WG612335	09/16/12 12:43
Acenaphthylene	< .001	mg/l			WG612335	09/16/12 12:43
Anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzidine	< .01	mg/l			WG612335	09/16/12 12:43
Benzo(a)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(a)pyrene	< .001	mg/l			WG612335	09/16/12 12:43

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Est. 1970

September 19, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(b)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(g,h,i)perylene	< .001	mg/l			WG612335	09/16/12 12:43
Benzo(k)fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Benzylbutyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethoxy)methane	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroethyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG612335	09/16/12 12:43
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Chrysene	< .001	mg/l			WG612335	09/16/12 12:43
Di-n-butyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Di-n-octyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dibenz(a,h)anthracene	< .001	mg/l			WG612335	09/16/12 12:43
Diethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Dimethyl phthalate	< .003	mg/l			WG612335	09/16/12 12:43
Fluoranthene	< .001	mg/l			WG612335	09/16/12 12:43
Fluorene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachloro-1,3-butadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachlorobenzene	< .001	mg/l			WG612335	09/16/12 12:43
Hexachlorocyclopentadiene	< .01	mg/l			WG612335	09/16/12 12:43
Hexachloroethane	< .01	mg/l			WG612335	09/16/12 12:43
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG612335	09/16/12 12:43
Isophorone	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodi-n-propylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodimethylamine	< .01	mg/l			WG612335	09/16/12 12:43
n-Nitrosodiphenylamine	< .01	mg/l			WG612335	09/16/12 12:43
Naphthalene	< .001	mg/l			WG612335	09/16/12 12:43
Nitrobenzene	< .01	mg/l			WG612335	09/16/12 12:43
Pentachlorophenol	< .001	mg/l			WG612335	09/16/12 12:43
Phenanthrene	< .001	mg/l			WG612335	09/16/12 12:43
Phenol	< .01	mg/l			WG612335	09/16/12 12:43
Pyrene	< .001	mg/l			WG612335	09/16/12 12:43
2,4,6-Tribromophenol		% Rec.	54.44	16-147	WG612335	09/16/12 12:43
2-Fluorobiphenyl		% Rec.	66.96	29-127	WG612335	09/16/12 12:43
2-Fluorophenol		% Rec.	36.74	10-75	WG612335	09/16/12 12:43
Nitrobenzene-d5		% Rec.	61.08	17-119	WG612335	09/16/12 12:43
Phenol-d5		% Rec.	30.33	10-63	WG612335	09/16/12 12:43
p-Terphenyl-d14		% Rec.	78.70	40-174	WG612335	09/16/12 12:43
Specific Conductance	4.71	umhos/cm			WG612653	09/16/12 09:29
Antimony,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Arsenic,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Molybdenum,Dissolved	< .002	mg/l			WG612880	09/17/12 03:28
Selenium,Dissolved	< .001	mg/l			WG612880	09/17/12 03:28
Mercury,Dissolved	< .0002	mg/l			WG612402	09/17/12 11:46
TPH (GC/FID) High Fraction	< .1	ppm			WG612215	09/14/12 19:14
o-Terphenyl		% Rec.	100.4	50-150	WG612215	09/14/12 19:14
Dissolved Solids	< 10	mg/l			WG612486	09/18/12 10:34
Barium,Dissolved	< .005	mg/l			WG612985	09/18/12 00:11

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		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Calcium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Chromium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Copper,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Iron,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Magnesium,Dissolved	< .1	mg/l			WG612985	09/18/12 00:11
Manganese,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Nickel,Dissolved	< .02	mg/l			WG612985	09/18/12 00:11
Potassium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Silicon,Dissolved	< .2	mg/l			WG612985	09/18/12 00:11
Sodium,Dissolved	< .5	mg/l			WG612985	09/18/12 00:11
Strontium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Vanadium,Dissolved	< .01	mg/l			WG612985	09/18/12 00:11
Zinc,Dissolved	< .03	mg/l			WG612985	09/18/12 00:11
Lithium,Dissolved	< .015	mg/l			WG613202	09/19/12 08:29

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury	mg/l	0	0		0	20	L594224-01	WG611975
Alkalinity	mg/l	300.	290.		2.39	20	L594221-01	WG612248
Alkalinity	mg/l	0	0		0	20	L594275-03	WG612248
TOC (Total Organic Carbon)	mg/l	2300	2300		1.76	20	L593857-03	WG612253
TOC (Total Organic Carbon)	mg/l	32.0	32.0		0.156	20	L594524-07	WG612253
pH	su	7.50	7.50		0.267	1	L594224-01	WG612480
pH	su	7.90	7.90		0.253	1	L594643-02	WG612480
Chloride	mg/l	10.0	11.0		4.65	20	L594275-04	WG612172
Sulfate	mg/l	8.10	8.10		0	20	L594275-04	WG612172
Sulfate	mg/l	35.0	35.0		0.286	20	L594374-10	WG612172
Specific Conductance	umhos/cm	910.	910.		0.439	20	L594221-01	WG612653
Specific Conductance	umhos/cm	410.	410.		0.489	20	L595027-02	WG612653
Antimony,Dissolved	mg/l	0	0		0	20	L594224-01	WG612880
Arsenic,Dissolved	mg/l	0.00140	0.00150		4.08	20	L594224-01	WG612880
Molybdenum,Dissolved	mg/l	0.00370	0.00370		1.08*	0	L594224-01	WG612880
Selenium,Dissolved	mg/l	0.00800	0.00720		10.3	20	L594224-01	WG612880
Mercury,Dissolved	mg/l	0	0		0	20	L594224-01	WG612402
Dissolved Solids	mg/l	2600	2550		0.0392	5	L594224-01	WG612486
Barium,Dissolved	mg/l	0.0640	0.0630		1.26	20	L594520-01	WG612985
Boron,Dissolved	mg/l	0.460	0.448		2.64*	0	L594520-01	WG612985

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Calcium,Dissolved	mg/l	120.	120.	1.65	20	L594520-01	WG612985
Chromium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Copper,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Iron,Dissolved	mg/l	4.00	3.89	2.79	20	L594520-01	WG612985
Magnesium,Dissolved	mg/l	50.0	48.0	3.08	20	L594520-01	WG612985
Manganese,Dissolved	mg/l	0.410	0.401	2.46	20	L594520-01	WG612985
Nickel,Dissolved	mg/l	0	0.00390	NA	20	L594520-01	WG612985
Potassium,Dissolved	mg/l	8.30	8.30	0.481	20	L594520-01	WG612985
Silicon,Dissolved	mg/l	13.0	12.7	3.10*	0	L594520-01	WG612985
Sodium,Dissolved	mg/l	50.0	49.8	0.201	20	L594520-01	WG612985
Strontium,Dissolved	mg/l	0.190	0.188	0.533	20	L594520-01	WG612985
Vanadium,Dissolved	mg/l	0	0	0	20	L594520-01	WG612985
Zinc,Dissolved	mg/l	0.0370	0.0373	1.62	20	L594520-01	WG612985
Lithium,Dissolved	mg/l	0.0470	0.0449	4.14	20	L595020-01	WG613202

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	5.77	105.	70-124	WG611964
a,a,a-Trifluorotoluene(FID)				107.7	62-128	WG611964
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0263	105.	77-128	WG611956
1,1,1-Trichloroethane	mg/l	.025	0.0254	102.	71-126	WG611956
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.2	78-130	WG611956
1,1,2-Trichloroethane	mg/l	.025	0.0248	99.3	81-121	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0257	103.	53-143	WG611956
1,1-Dichloroethane	mg/l	.025	0.0242	96.9	73-123	WG611956
1,1-Dichloroethene	mg/l	.025	0.0248	99.1	54-134	WG611956
1,1-Dichloropropene	mg/l	.025	0.0247	98.9	67-127	WG611956
1,2,3-Trichlorobenzene	mg/l	.025	0.0266	106.	77-130	WG611956
1,2,3-Trichloropropane	mg/l	.025	0.0265	106.	68-130	WG611956
1,2,3-Trimethylbenzene	mg/l	.025	0.0234	93.6	77-126	WG611956
1,2,4-Trichlorobenzene	mg/l	.025	0.0271	108.	76-127	WG611956
1,2,4-Trimethylbenzene	mg/l	.025	0.0253	101.	77-129	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0270	108.	55-142	WG611956
1,2-Dibromoethane	mg/l	.025	0.0260	104.	78-124	WG611956
1,2-Dichlorobenzene	mg/l	.025	0.0245	98.2	82-121	WG611956
1,2-Dichloroethane	mg/l	.025	0.0252	101.	69-128	WG611956
1,2-Dichloropropane	mg/l	.025	0.0247	98.6	77-121	WG611956
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG611956
1,3-Dichlorobenzene	mg/l	.025	0.0251	100.	77-127	WG611956
1,3-Dichloropropane	mg/l	.025	0.0247	98.7	78-117	WG611956
1,4-Dichlorobenzene	mg/l	.025	0.0245	97.9	79-117	WG611956
2,2-Dichloropropane	mg/l	.025	0.0259	104.	63-130	WG611956
2-Butanone (MEK)	mg/l	.125	0.171	137.	58-144	WG611956
2-Chloroethyl vinyl ether	mg/l	.125	0.146	117.	26-172	WG611956
2-Chlorotoluene	mg/l	.025	0.0250	99.8	78-123	WG611956
4-Chlorotoluene	mg/l	.025	0.0248	99.1	78-122	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.146	117.	58-147	WG611956
Acetone	mg/l	.125	0.200	160.*	49-153	WG611956
Acrolein	mg/l	.125	0.0700	56.0	10-181	WG611956
Acrylonitrile	mg/l	.125	0.140	112.	53-153	WG611956
Benzene	mg/l	.025	0.0238	95.3	72-119	WG611956
Bromobenzene	mg/l	.025	0.0244	97.6	76-121	WG611956
Bromodichloromethane	mg/l	.025	0.0245	98.0	75-127	WG611956
Bromoform	mg/l	.025	0.0261	105.	61-136	WG611956

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromomethane	mg/l	.025	0.0257	103.	42-172	WG611956
Carbon tetrachloride	mg/l	.025	0.0245	98.2	63-129	WG611956
Chlorobenzene	mg/l	.025	0.0242	96.9	78-123	WG611956
Chlorodibromomethane	mg/l	.025	0.0252	101.	73-128	WG611956
Chloroethane	mg/l	.025	0.0260	104.	52-164	WG611956
Chloroform	mg/l	.025	0.0250	100.	76-122	WG611956
Chloromethane	mg/l	.025	0.0243	97.1	50-141	WG611956
cis-1,2-Dichloroethene	mg/l	.025	0.0242	96.7	75-121	WG611956
cis-1,3-Dichloropropene	mg/l	.025	0.0247	98.8	74-124	WG611956
Di-isopropyl ether	mg/l	.025	0.0256	102.	66-129	WG611956
Dibromomethane	mg/l	.025	0.0257	103.	77-124	WG611956
Dichlorodifluoromethane	mg/l	.025	0.0243	97.3	33-173	WG611956
Ethylbenzene	mg/l	.025	0.0248	99.3	77-124	WG611956
Hexachloro-1,3-butadiene	mg/l	.025	0.0248	99.2	71-134	WG611956
Isopropylbenzene	mg/l	.025	0.0276	110.	74-126	WG611956
Methyl tert-butyl ether	mg/l	.025	0.0271	108.	67-127	WG611956
Methylene Chloride	mg/l	.025	0.0238	95.4	67-122	WG611956
n-Butylbenzene	mg/l	.025	0.0250	99.9	74-130	WG611956
n-Propylbenzene	mg/l	.025	0.0248	99.1	77-125	WG611956
Naphthalene	mg/l	.025	0.0267	107.	70-134	WG611956
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG611956
sec-Butylbenzene	mg/l	.025	0.0256	102.	77-130	WG611956
Styrene	mg/l	.025	0.0256	102.	69-145	WG611956
tert-Butylbenzene	mg/l	.025	0.0257	103.	76-131	WG611956
Tetrachloroethene	mg/l	.025	0.0243	97.2	69-131	WG611956
Toluene	mg/l	.025	0.0242	96.7	75-114	WG611956
trans-1,2-Dichloroethene	mg/l	.025	0.0240	96.1	63-127	WG611956
trans-1,3-Dichloropropene	mg/l	.025	0.0243	97.4	69-124	WG611956
Trichloroethene	mg/l	.025	0.0235	94.0	69-131	WG611956
Trichlorofluoromethane	mg/l	.025	0.0254	102.	53-161	WG611956
Vinyl chloride	mg/l	.025	0.0255	102.	55-142	WG611956
Xylenes, Total	mg/l	.075	0.0748	99.7	77-123	WG611956
4-Bromofluorobenzene				101.6	82-120	WG611956
Dibromofluoromethane				102.3	82-126	WG611956
Toluene-d8				103.1	92-112	WG611956
Mercury	mg/l	.003	0.00290	96.7	85-115	WG611975
Ethane	mg/l	.645	0.737	114.	70-130	WG612418
Ethene	mg/l	.635	0.706	111.	70-130	WG612418
Methane	mg/l	.339	0.373	110.	70-130	WG612418
Alkalinity	mg/l	100	94.0	94.0	85-115	WG612248
TOC (Total Organic Carbon)	mg/l	75	74.1	98.8	85-115	WG612253
pH	su	6.03	6.03	100.	98-101	WG612480
Bromide	mg/l	40	39.8	99.5	90-110	WG612172
Chloride	mg/l	40	39.7	99.3	90-110	WG612172
Fluoride	mg/l	8	7.92	99.0	90-110	WG612172
Sulfate	mg/l	40	38.6	96.5	90-110	WG612172

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4-Trichlorobenzene	mg/l	.01	0.00694	69.4	18-130	WG612335
2,4,6-Trichlorophenol	mg/l	.01	0.00702	70.2	12-147	WG612335
2,4-Dichlorophenol	mg/l	.01	0.00764	76.4	10-157	WG612335
2,4-Dimethylphenol	mg/l	.01	0.00819	81.9	19-160	WG612335
2,4-Dinitrophenol	mg/l	.01	0.00492	49.2	10-135	WG612335
2,4-Dinitrotoluene	mg/l	.01	0.00821	82.1	30-168	WG612335
2,6-Dinitrotoluene	mg/l	.01	0.00854	85.4	32-163	WG612335
2-Chloronaphthalene	mg/l	.01	0.00761	76.1	29-149	WG612335
2-Chlorophenol	mg/l	.01	0.00654	65.4	16-129	WG612335
2-Nitrophenol	mg/l	.01	0.00815	81.5	14-158	WG612335
3,3-Dichlorobenzidine	mg/l	.01	0.00909	90.9	42-150	WG612335
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00606	60.6	10-164	WG612335
4-Bromophenyl-phenylether	mg/l	.01	0.00778	77.8	40-166	WG612335
4-Chloro-3-methylphenol	mg/l	.01	0.00719	71.9	14-158	WG612335
4-Chlorophenyl-phenylether	mg/l	.01	0.00844	84.4	39-155	WG612335
4-Nitrophenol	mg/l	.01	0.00184	18.4	10-61	WG612335
Acenaphthene	mg/l	.01	0.00796	79.6	37-159	WG612335
Acenaphthylene	mg/l	.01	0.00754	75.4	34-162	WG612335
Anthracene	mg/l	.01	0.00817	81.7	48-167	WG612335
Benzidine	mg/l	.01	0.00207	20.7	10-86	WG612335
Benzo(a)anthracene	mg/l	.01	0.00834	83.4	46-167	WG612335
Benzo(a)pyrene	mg/l	.01	0.00864	86.4	39-167	WG612335
Benzo(b)fluoranthene	mg/l	.01	0.00840	84.0	39-173	WG612335
Benzo(g,h,i)perylene	mg/l	.01	0.00901	90.1	42-181	WG612335
Benzo(k)fluoranthene	mg/l	.01	0.00875	87.5	42-178	WG612335
Benzylbutyl phthalate	mg/l	.01	0.00862	86.2	10-178	WG612335
Bis(2-chlorethoxy)methane	mg/l	.01	0.00854	85.4	34-155	WG612335
Bis(2-chloroethyl)ether	mg/l	.01	0.00857	85.7	22-149	WG612335
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00797	79.7	26-149	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00900	90.0	42-191	WG612335
Chrysene	mg/l	.01	0.00892	89.2	46-170	WG612335
Di-n-butyl phthalate	mg/l	.01	0.00816	81.6	33-175	WG612335
Di-n-octyl phthalate	mg/l	.01	0.00809	80.9	40-170	WG612335
Dibenz(a,h)anthracene	mg/l	.01	0.00872	87.2	43-187	WG612335
Diethyl phthalate	mg/l	.01	0.00826	82.6	10-182	WG612335
Dimethyl phthalate	mg/l	.01	0.00852	85.2	10-165	WG612335
Fluoranthene	mg/l	.01	0.00838	83.8	46-171	WG612335
Fluorene	mg/l	.01	0.00805	80.5	39-163	WG612335
Hexachloro-1,3-butadiene	mg/l	.01	0.00662	66.2	18-136	WG612335
Hexachlorobenzene	mg/l	.01	0.00701	70.1	38-163	WG612335
Hexachlorocyclopentadiene	mg/l	.01	0.00303	30.3	10-142	WG612335
Hexachloroethane	mg/l	.01	0.00651	65.1	10-130	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00869	86.9	42-184	WG612335
Isophorone	mg/l	.01	0.00847	84.7	36-166	WG612335
n-Nitrosodi-n-propylamine	mg/l	.01	0.00865	86.5	27-157	WG612335
n-Nitrosodimethylamine	mg/l	.01	0.00457	45.7	10-96	WG612335
n-Nitrosodiphenylamine	mg/l	.01	0.00807	80.7	41-168	WG612335
Naphthalene	mg/l	.01	0.00741	74.1	26-147	WG612335
Nitrobenzene	mg/l	.01	0.00819	81.9	22-154	WG612335
Pentachlorophenol	mg/l	.01	0.00351	35.1	10-128	WG612335
Phenanthrene	mg/l	.01	0.00799	79.9	46-163	WG612335
Phenol	mg/l	.01	0.00268	26.8	10-69	WG612335
Pyrene	mg/l	.01	0.00860	86.0	45-176	WG612335
2,4,6-Tribromophenol				60.98	16-147	WG612335
2-Fluorobiphenyl				74.83	29-127	WG612335
2-Fluorophenol				33.71	10-75	WG612335
Nitrobenzene-d5				78.22	17-119	WG612335
Phenol-d5				25.50	10-63	WG612335

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
p-Terphenyl-d14				84.42	40-174	
Specific Conductance	umhos/cm	1050	1080	103.	85-115	WG612653
Antimony,Dissolved	mg/l	.05	0.0488	97.6	85-115	WG612880
Arsenic,Dissolved	mg/l	.05	0.0460	92.0	85-115	WG612880
Molybdenum,Dissolved	mg/l	.05	0.0489	97.8	85-115	WG612880
Selenium,Dissolved	mg/l	.05	0.0448	89.6	85-115	WG612880
Mercury,Dissolved	mg/l	.003	0.00284	94.7	85-115	WG612402
TPH (GC/FID) High Fraction	ppm	1.5	2.20	147.	50-150	WG612215
o-Terphenyl				137.0	50-150	WG612215
Dissolved Solids	mg/l	8800	8640	98.2	85-115	WG612486
Barium,Dissolved	mg/l	1	1.04	104.	85-115	WG612985
Boron,Dissolved	mg/l	1	0.950	95.0	85-115	WG612985
Calcium,Dissolved	mg/l	10	10.4	104.	85-115	WG612985
Chromium,Dissolved	mg/l	1	1.02	102.	85-115	WG612985
Copper,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Iron,Dissolved	mg/l	1	0.989	98.9	85-115	WG612985
Magnesium,Dissolved	mg/l	10	10.8	108.	85-115	WG612985
Manganese,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Nickel,Dissolved	mg/l	1	1.01	101.	85-115	WG612985
Potassium,Dissolved	mg/l	10	10.2	102.	85-115	WG612985
Silicon,Dissolved	mg/l	1	0.902	90.2	85-115	WG612985
Sodium,Dissolved	mg/l	10	10.5	105.	85-115	WG612985
Strontium,Dissolved	mg/l	1	1.03	103.	85-115	WG612985
Vanadium,Dissolved	mg/l	1	0.996	99.6	85-115	WG612985
Zinc,Dissolved	mg/l	1	1.06	106.	85-115	WG612985
Lithium,Dissolved	mg/l	.5	0.525	105.	85-115	WG613202

Analyte	Units	Laboratory Control	Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref %Rec				
TPH (GC/FID) Low Fraction	mg/l	5.39	5.77	98.0	70-124	6.89	20
a,a,a-Trifluorotoluene(FID)				107.1	62-128		WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0255	0.0263	102.	77-128	2.88	20
1,1,1-Trichloroethane	mg/l	0.0247	0.0254	99.0	71-126	2.77	20
1,1,2,2-Tetrachloroethane	mg/l	0.0240	0.0246	96.0	78-130	2.36	20
1,1,2-Trichloroethane	mg/l	0.0247	0.0248	99.0	81-121	0.660	20
1,1,2-Trichlorotrifluoroethane	mg/l	0.0250	0.0257	100.	53-143	2.83	20
1,1-Dichloroethane	mg/l	0.0244	0.0242	98.0	73-123	0.690	20
1,1-Dichloroethene	mg/l	0.0248	0.0248	99.0	54-134	0.310	20
1,1-Dichloropropene	mg/l	0.0252	0.0247	101.	67-127	1.87	20
1,2,3-Trichlorobenzene	mg/l	0.0269	0.0266	108.	77-130	1.13	20
1,2,3-Trichloropropane	mg/l	0.0245	0.0265	98.0	68-130	7.68	20
1,2,3-Trimethylbenzene	mg/l	0.0238	0.0234	95.0	77-126	1.55	20
1,2,4-Trichlorobenzene	mg/l	0.0274	0.0271	109.	76-127	0.980	20
1,2,4-Trimethylbenzene	mg/l	0.0254	0.0253	102.	77-129	0.500	20

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0261	0.0270	104.	55-142	3.49	20	WG611956
1,2-Dibromoethane	mg/l	0.0254	0.0260	102.	78-124	2.42	20	WG611956
1,2-Dichlorobenzene	mg/l	0.0253	0.0245	101.	82-121	3.07	20	WG611956
1,2-Dichloroethane	mg/l	0.0250	0.0252	100.	69-128	0.740	20	WG611956
1,2-Dichloropropane	mg/l	0.0245	0.0247	98.0	77-121	0.810	20	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0256	0.0256	102.	78-127	0.0400	20	WG611956
1,3-Dichlorobenzene	mg/l	0.0254	0.0251	102.	77-127	1.21	20	WG611956
1,3-Dichloropropane	mg/l	0.0245	0.0247	98.0	78-117	0.730	20	WG611956
1,4-Dichlorobenzene	mg/l	0.0252	0.0245	101.	79-117	3.02	20	WG611956
2,2-Dichloropropane	mg/l	0.0246	0.0259	98.0	63-130	5.34	20	WG611956
2-Butanone (MEK)	mg/l	0.158	0.171	126.	58-144	7.91	20	WG611956
2-Chloroethyl vinyl ether	mg/l	0.141	0.146	113.	26-172	3.43	22	WG611956
2-Chlorotoluene	mg/l	0.0253	0.0250	101.	78-123	1.18	20	WG611956
4-Chlorotoluene	mg/l	0.0251	0.0248	100.	78-122	1.35	20	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.137	0.146	109.	58-147	6.53	20	WG611956
Acetone	mg/l	0.184	0.200	147.	49-153	8.21	21	WG611956
Acrolein	mg/l	0.0680	0.0700	54.0	10-181	2.92	30	WG611956
Acrylonitrile	mg/l	0.132	0.140	106.	53-153	5.74	20	WG611956
Benzene	mg/l	0.0242	0.0238	97.0	72-119	1.77	20	WG611956
Bromobenzene	mg/l	0.0246	0.0244	98.0	76-121	0.960	20	WG611956
Bromodichloromethane	mg/l	0.0245	0.0245	98.0	75-127	0.140	20	WG611956
Bromoform	mg/l	0.0260	0.0261	104.	61-136	0.610	20	WG611956
Bromomethane	mg/l	0.0253	0.0257	101.	42-172	1.67	20	WG611956
Carbon tetrachloride	mg/l	0.0243	0.0245	97.0	63-129	0.850	20	WG611956
Chlorobenzene	mg/l	0.0249	0.0242	99.0	78-123	2.59	20	WG611956
Chlorodibromomethane	mg/l	0.0250	0.0252	100.	73-128	0.660	20	WG611956
Chloroethane	mg/l	0.0266	0.0260	106.	52-164	2.16	20	WG611956
Chloroform	mg/l	0.0249	0.0250	99.0	76-122	0.710	20	WG611956
Chloromethane	mg/l	0.0236	0.0243	94.0	50-141	2.69	20	WG611956
cis-1,2-Dichloroethene	mg/l	0.0239	0.0242	96.0	75-121	1.04	20	WG611956
cis-1,3-Dichloropropene	mg/l	0.0252	0.0247	101.	74-124	1.92	20	WG611956
Di-isopropyl ether	mg/l	0.0253	0.0256	101.	66-129	1.00	20	WG611956
Dibromomethane	mg/l	0.0256	0.0257	102.	77-124	0.550	20	WG611956
Dichlorodifluoromethane	mg/l	0.0247	0.0243	99.0	33-173	1.63	20	WG611956
Ethylbenzene	mg/l	0.0256	0.0248	102.	77-124	3.17	20	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0249	0.0248	99.0	71-134	0.330	20	WG611956
Isopropylbenzene	mg/l	0.0275	0.0276	110.	74-126	0.340	20	WG611956
Methyl tert-butyl ether	mg/l	0.0256	0.0271	102.	67-127	5.72	20	WG611956
Methylene Chloride	mg/l	0.0237	0.0238	95.0	67-122	0.430	20	WG611956
n-Butylbenzene	mg/l	0.0259	0.0250	104.	74-130	3.58	20	WG611956
n-Propylbenzene	mg/l	0.0251	0.0248	100.	77-125	1.14	20	WG611956
Naphthalene	mg/l	0.0260	0.0267	104.	70-134	2.36	20	WG611956
p-Isopropyltoluene	mg/l	0.0262	0.0263	105.	77-132	0.600	20	WG611956
sec-Butylbenzene	mg/l	0.0253	0.0256	101.	77-130	1.37	20	WG611956
Styrene	mg/l	0.0259	0.0256	104.	69-145	1.47	20	WG611956
tert-Butylbenzene	mg/l	0.0254	0.0257	102.	76-131	1.04	20	WG611956
Tetrachloroethene	mg/l	0.0249	0.0243	100.	69-131	2.44	20	WG611956
Toluene	mg/l	0.0247	0.0242	99.0	75-114	1.99	20	WG611956
trans-1,2-Dichloroethene	mg/l	0.0241	0.0240	96.0	63-127	0.360	20	WG611956
trans-1,3-Dichloropropene	mg/l	0.0245	0.0243	98.0	69-124	0.460	20	WG611956
Trichloroethene	mg/l	0.0235	0.0235	94.0	69-131	0.170	20	WG611956
Trichlorofluoromethane	mg/l	0.0256	0.0254	102.	53-161	0.530	20	WG611956
Vinyl chloride	mg/l	0.0250	0.0255	100.	55-142	1.78	20	WG611956
Xylenes, Total	mg/l	0.0759	0.0748	101.	77-123	1.50	20	WG611956
4-Bromofluorobenzene				100.3	82-120			WG611956
Dibromofluoromethane				100.8	82-126			WG611956
Toluene-d8				103.4	92-112			WG611956

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Ethane	mg/l	0.693	0.737	108.	70-130	6.07	25	WG612418
Ethene	mg/l	0.666	0.706	105.	70-130	5.89	25	WG612418
Methane	mg/l	0.349	0.373	103.	70-130	6.50	25	WG612418
Alkalinity	mg/l	99.0	94.0	99.0	85-115	5.18	20	WG612248
TOC (Total Organic Carbon)	mg/l	72.5	74.1	97.0	85-115	2.10	20	WG612253
pH	su	6.04	6.03	100.	98-101	0.166	20	WG612480
Bromide	mg/l	39.8	39.8	100.	90-110	0	20	WG612172
Chloride	mg/l	39.7	39.7	99.0	90-110	0	20	WG612172
Fluoride	mg/l	7.92	7.92	99.0	90-110	0	20	WG612172
Sulfate	mg/l	38.7	38.6	97.0	90-110	0.259	20	WG612172
1,2,4-Trichlorobenzene	mg/l	0.00642	0.00694	64.0	18-130	7.85	32	WG612335
2,4,6-Trichlorophenol	mg/l	0.00620	0.00702	62.0	12-147	12.4	40	WG612335
2,4-Dichlorophenol	mg/l	0.00684	0.00764	68.0	10-157	11.1	40	WG612335
2,4-Dimethylphenol	mg/l	0.00700	0.00819	70.0	19-160	15.6	40	WG612335
2,4-Dinitrophenol	mg/l	0.00471	0.00492	47.0	10-135	4.43	40	WG612335
2,4-Dinitrotoluene	mg/l	0.00723	0.00821	72.0	30-168	12.7	32	WG612335
2,6-Dinitrotoluene	mg/l	0.00743	0.00854	74.0	32-163	13.9	30	WG612335
2-Chloronaphthalene	mg/l	0.00645	0.00761	64.0	29-149	16.5	34	WG612335
2-Chlorophenol	mg/l	0.00582	0.00654	58.0	16-129	11.7	40	WG612335
2-Nitrophenol	mg/l	0.00704	0.00815	70.0	14-158	14.6	40	WG612335
3,3-Dichlorobenzidine	mg/l	0.00804	0.00909	80.0	42-150	12.3	29	WG612335
4,6-Dinitro-2-methylphenol	mg/l	0.00505	0.00606	50.0	10-164	18.1	40	WG612335
4-Bromophenyl-phenylether	mg/l	0.00751	0.00778	75.0	40-166	3.57	36	WG612335
4-Chloro-3-methylphenol	mg/l	0.00645	0.00719	64.0	14-158	10.8	40	WG612335
4-Chlorophenyl-phenylether	mg/l	0.00812	0.00844	81.0	39-155	3.85	33	WG612335
4-Nitrophenol	mg/l	0.00200	0.00184	20.0	10-61	8.46	40	WG612335
Acenaphthene	mg/l	0.00707	0.00796	71.0	37-159	11.9	30	WG612335
Acenaphthylene	mg/l	0.00710	0.00754	71.0	34-162	6.01	31	WG612335
Anthracene	mg/l	0.00752	0.00817	75.0	48-167	8.28	26	WG612335
Benzidine	mg/l	0.00262	0.00207	26.0	10-86	23.5	40	WG612335
Benzo(a)anthracene	mg/l	0.00725	0.00834	72.0	46-167	13.9	29	WG612335
Benzo(a)pyrene	mg/l	0.00719	0.00864	72.0	39-167	18.4	29	WG612335
Benzo(b)fluoranthene	mg/l	0.00772	0.00840	77.0	39-173	8.42	32	WG612335
Benzo(g,h,i)perylene	mg/l	0.00765	0.00901	76.0	42-181	16.3	30	WG612335
Benzo(k)fluoranthene	mg/l	0.00739	0.00875	74.0	42-178	16.9	33	WG612335
Benzylbutyl phthalate	mg/l	0.00762	0.00862	76.0	10-178	12.2	40	WG612335
Bis(2-chlorethoxy)methane	mg/l	0.00751	0.00854	75.0	34-155	12.9	31	WG612335
Bis(2-chloroethyl)ether	mg/l	0.00759	0.00857	76.0	22-149	12.1	38	WG612335
Bis(2-chloroisopropyl)ether	mg/l	0.00688	0.00797	69.0	26-149	14.8	34	WG612335
Bis(2-ethylhexyl)phthalate	mg/l	0.00814	0.00900	81.0	42-191	9.99	33	WG612335
Chrysene	mg/l	0.00798	0.00892	80.0	46-170	11.1	30	WG612335
Di-n-butyl phthalate	mg/l	0.00790	0.00816	79.0	33-175	3.19	39	WG612335
Di-n-octyl phthalate	mg/l	0.00744	0.00809	74.0	40-170	8.44	28	WG612335
Dibenz(a,h)anthracene	mg/l	0.00778	0.00872	78.0	43-187	11.3	31	WG612335
Diethyl phthalate	mg/l	0.00767	0.00826	77.0	10-182	7.33	35	WG612335
Dimethyl phthalate	mg/l	0.00800	0.00852	80.0	10-165	6.37	37	WG612335
Fluoranthene	mg/l	0.00763	0.00838	76.0	46-171	9.32	37	WG612335
Fluorene	mg/l	0.00736	0.00805	74.0	39-163	9.02	36	WG612335
Hexachloro-1,3-butadiene	mg/l	0.00606	0.00662	60.0	18-136	8.84	30	WG612335

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Hexachlorobenzene	mg/l	0.00702	0.00701	70.0	38-163	0.0901	35	WG612335
Hexachlorocyclopentadiene	mg/l	0.00248	0.00303	25.0	10-142	20.1	40	WG612335
Hexachloroethane	mg/l	0.00554	0.00651	55.0	10-130	16.2	39	WG612335
Indeno(1,2,3-cd)pyrene	mg/l	0.00774	0.00869	77.0	42-184	11.6	32	WG612335
Isophorone	mg/l	0.00795	0.00847	80.0	36-166	6.30	35	WG612335
n-Nitrosodi-n-propylamine	mg/l	0.00758	0.00865	76.0	27-157	13.3	31	WG612335
n-Nitrosodimethylamine	mg/l	0.00428	0.00457	43.0	10-96	6.51	36	WG612335
n-Nitrosodiphenylamine	mg/l	0.00712	0.00807	71.0	41-168	12.6	37	WG612335
Naphthalene	mg/l	0.00652	0.00741	65.0	26-147	12.9	31	WG612335
Nitrobenzene	mg/l	0.00734	0.00819	73.0	22-154	11.0	37	WG612335
Pentachlorophenol	mg/l	0.00350	0.00351	35.0	10-128	0.270	40	WG612335
Phenanthrene	mg/l	0.00737	0.00799	74.0	46-163	8.00	29	WG612335
Phenol	mg/l	0.00283	0.00268	28.0	10-69	5.60	40	WG612335
Pyrene	mg/l	0.00768	0.00860	77.0	45-176	11.3	28	WG612335
2,4,6-Tribromophenol				59.03	16-147			WG612335
2-Fluorobiphenyl				68.14	29-127			WG612335
2-Fluorophenol				32.43	10-75			WG612335
Nitrobenzene-d5				73.11	17-119			WG612335
Phenol-d5				25.85	10-63			WG612335
p-Terphenyl-d14				72.88	40-174			WG612335
Specific Conductance	umhos/	1080	1080	103.	85-115	0	20	WG612653
TPH (GC/FID) High Fraction	ppm	2.10	2.20	140.	50-150	4.65	20	WG612215
o-Terphenyl				119.9	50-150			WG612215
Dissolved Solids	mg/l	8690	8640	99.0	85-115	0.554	5	WG612486

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction	mg/l	5.38	0	5.5	97.7	55-109	L594224-01	WG611964
a,a,a-Trifluorotoluene(FID)					105.1	62-128		WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0257	0	.025	103.	71-130	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0251	0	.025	100.	58-137	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0235	0	.025	94.0	64-149	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0245	0	.025	98.2	73-128	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0244	0	.025	97.5	36-159	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0241	0	.025	96.4	58-133	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0246	0	.025	98.3	32-152	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0237	0	.025	94.6	50-140	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0255	0	.025	102.	68-135	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0250	0	.025	99.9	74-137	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0237	0	.025	95.0	67-133	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0250	0	.025	99.8	67-133	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0242	0	.025	96.7	62-141	L594224-01	WG611956
1,2-Dibromo-3-Chloropropane	mg/l	0.0255	0	.025	102.	55-148	L594224-01	WG611956
1,2-Dibromoethane	mg/l	0.0255	0	.025	102.	71-129	L594224-01	WG611956
1,2-Dichlorobenzene	mg/l	0.0242	0	.025	96.7	75-125	L594224-01	WG611956
1,2-Dichloroethane	mg/l	0.0247	0	.025	98.9	59-135	L594224-01	WG611956
1,2-Dichloropropane	mg/l	0.0244	0	.025	97.7	68-126	L594224-01	WG611956
1,3,5-Trimethylbenzene	mg/l	0.0249	0	.025	99.5	67-136	L594224-01	WG611956
1,3-Dichlorobenzene	mg/l	0.0239	0	.025	95.5	69-131	L594224-01	WG611956
1,3-Dichloropropane	mg/l	0.0242	0	.025	96.7	70-122	L594224-01	WG611956

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Encana  
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Quality Assurance Report  
Level II

L594224

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Tax I.D. 62-0814289

Est. 1970

September 19, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,4-Dichlorobenzene	mg/l	0.0237	0	.025	94.8	70-123	L594224-01	WG611956
2,2-Dichloropropane	mg/l	0.0251	0	.025	100.	51-141	L594224-01	WG611956
2-Butanone (MEK)	mg/l	0.132	0	.125	106.	51-149	L594224-01	WG611956
2-Chloroethyl vinyl ether	mg/l	0.000324	0	.125	0.259*	10-161	L594224-01	WG611956
2-Chlorotoluene	mg/l	0.0243	0	.025	97.1	65-133	L594224-01	WG611956
4-Chlorotoluene	mg/l	0.0238	0	.025	95.2	67-129	L594224-01	WG611956
4-Methyl-2-pentanone (MIBK)	mg/l	0.135	0	.125	108.	53-154	L594224-01	WG611956
Acetone	mg/l	0.116	0	.125	92.8	34-146	L594224-01	WG611956
Acrolein	mg/l	0.132	0	.125	105.	10-189	L594224-01	WG611956
Acrylonitrile	mg/l	0.135	0	.125	108.	49-162	L594224-01	WG611956
Benzene	mg/l	0.0240	0	.025	95.9	51-134	L594224-01	WG611956
Bromobenzene	mg/l	0.0240	0	.025	96.1	64-130	L594224-01	WG611956
Bromodichloromethane	mg/l	0.0246	0	.025	98.4	67-132	L594224-01	WG611956
Bromoform	mg/l	0.0254	0	.025	102.	59-137	L594224-01	WG611956
Bromomethane	mg/l	0.0260	0	.025	104.	23-177	L594224-01	WG611956
Carbon tetrachloride	mg/l	0.0243	0	.025	97.2	49-140	L594224-01	WG611956
Chlorobenzene	mg/l	0.0241	0	.025	96.5	69-126	L594224-01	WG611956
Chlorodibromomethane	mg/l	0.0248	0	.025	99.0	68-130	L594224-01	WG611956
Chloroethane	mg/l	0.0261	0	.025	104.	32-177	L594224-01	WG611956
Chloroform	mg/l	0.0249	0	.025	99.5	64-130	L594224-01	WG611956
Chloromethane	mg/l	0.0240	0	.025	95.9	27-155	L594224-01	WG611956
cis-1,2-Dichloroethene	mg/l	0.0240	0	.025	96.0	54-137	L594224-01	WG611956
cis-1,3-Dichloropropene	mg/l	0.0238	0	.025	95.4	63-127	L594224-01	WG611956
Di-isopropyl ether	mg/l	0.0262	0	.025	105.	58-133	L594224-01	WG611956
Dibromomethane	mg/l	0.0254	0	.025	102.	68-131	L594224-01	WG611956
Dichlorodifluoromethane	mg/l	0.0245	0	.025	98.2	16-188	L594224-01	WG611956
Ethylbenzene	mg/l	0.0246	0	.025	98.4	64-135	L594224-01	WG611956
Hexachloro-1,3-butadiene	mg/l	0.0236	0	.025	94.2	64-140	L594224-01	WG611956
Isopropylbenzene	mg/l	0.0272	0	.025	109.	62-134	L594224-01	WG611956
Methyl tert-butyl ether	mg/l	0.0270	0	.025	108.	55-136	L594224-01	WG611956
Methylene Chloride	mg/l	0.0233	0	.025	93.3	52-130	L594224-01	WG611956
n-Butylbenzene	mg/l	0.0233	0	.025	93.0	62-142	L594224-01	WG611956
n-Propylbenzene	mg/l	0.0237	0	.025	94.8	62-137	L594224-01	WG611956
Naphthalene	mg/l	0.0250	0	.025	99.9	65-140	L594224-01	WG611956
p-Isopropyltoluene	mg/l	0.0252	0	.025	101.	64-142	L594224-01	WG611956
sec-Butylbenzene	mg/l	0.0249	0	.025	99.7	67-139	L594224-01	WG611956
Styrene	mg/l	0.0238	0	.025	95.1	58-152	L594224-01	WG611956
tert-Butylbenzene	mg/l	0.0254	0	.025	102.	66-139	L594224-01	WG611956
Tetrachloroethene	mg/l	0.0229	0	.025	91.6	56-139	L594224-01	WG611956
Toluene	mg/l	0.0243	0	.025	97.4	61-126	L594224-01	WG611956
trans-1,2-Dichloroethene	mg/l	0.0240	0	.025	95.8	45-137	L594224-01	WG611956
trans-1,3-Dichloropropene	mg/l	0.0241	0	.025	96.5	59-130	L594224-01	WG611956
Trichloroethene	mg/l	0.0226	0	.025	90.4	40-155	L594224-01	WG611956
Trichlorofluoromethane	mg/l	0.0245	0	.025	98.1	35-177	L594224-01	WG611956
Vinyl chloride	mg/l	0.0250	0	.025	100.	32-159	L594224-01	WG611956
Xylenes, Total	mg/l	0.0727	0	.075	97.0	64-133	L594224-01	WG611956
4-Bromofluorobenzene					101.2	82-120		WG611956
Dibromofluoromethane					101.7	82-126		WG611956
Toluene-d8					104.3	92-112		WG611956
Mercury	mg/l	0.00298	0	.003	99.3	70-130	L594224-01	WG611975
Ethane	mg/l	0.682	0	.645	106.	70-130	L594625-02	WG612418
Ethene	mg/l	0.655	0	.635	103.	70-130	L594625-02	WG612418
Methane	mg/l	0.339	0	.339	100.	70-130	L594625-02	WG612418

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Alkalinity	mg/l	500.	450.	100	50.0*	80-120	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1880	810.	50	107.	80-120	L593857-04	WG612253
Chloride	mg/l	64.1	15.0	50	98.2	80-120	L594395-01	WG612172
Fluoride	mg/l	4.97	0.110	5	97.2	80-120	L594395-01	WG612172
Sulfate	mg/l	66.1	16.0	50	100.	80-120	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0544	0	.05	109.	75-125	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0538	0.00150	.05	105.	75-125	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0516	0.00370	.05	95.8	75-125	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0628	0.00720	.05	111.	75-125	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	0.0630	1	103.	75-125	L594520-01	WG612985
Boron, Dissolved	mg/l	1.45	0.448	1	100.	75-125	L594520-01	WG612985
Calcium, Dissolved	mg/l	130.	120.	10	100.	75-125	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.02	0	1	102.	75-125	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	0	1	103.	75-125	L594520-01	WG612985
Iron, Dissolved	mg/l	4.87	3.89	1	98.0	75-125	L594520-01	WG612985
Magnesium, Dissolved	mg/l	58.7	48.0	10	107.	75-125	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	0.401	1	103.	75-125	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	0.00390	1	101.	75-125	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.1	8.30	10	98.0	75-125	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.7	12.7	1	100.	75-125	L594520-01	WG612985
Sodium, Dissolved	mg/l	59.0	49.8	10	92.0	75-125	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.20	0.188	1	101.	75-125	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.01	0	1	101.	75-125	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.11	0.0373	1	107.	75-125	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.567	0.0449	.5	104.	75-125	L595020-01	WG613202

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.75	5.38	105.	55-109	6.78	20	L594224-01	WG611964
a,a,a-Trifluorotoluene (FID)				106.4	62-128				WG611964
1,1,1,2-Tetrachloroethane	mg/l	0.0233	0.0257	93.1	71-130	9.94	20	L594224-01	WG611956
1,1,1-Trichloroethane	mg/l	0.0247	0.0251	98.8	58-137	1.82	20	L594224-01	WG611956
1,1,2,2-Tetrachloroethane	mg/l	0.0226	0.0235	90.3	64-149	4.00	20	L594224-01	WG611956
1,1,2-Trichloroethane	mg/l	0.0222	0.0245	88.8	73-128	10.1	20	L594224-01	WG611956
1,1,2-Trichlorotrifluoroethane	mg/l	0.0249	0.0244	99.6	36-159	2.22	21	L594224-01	WG611956
1,1-Dichloroethane	mg/l	0.0230	0.0241	92.1	58-133	4.51	20	L594224-01	WG611956
1,1-Dichloroethene	mg/l	0.0243	0.0246	97.2	32-152	1.21	20	L594224-01	WG611956
1,1-Dichloropropene	mg/l	0.0242	0.0237	96.7	50-140	2.20	20	L594224-01	WG611956
1,2,3-Trichlorobenzene	mg/l	0.0232	0.0255	92.7	68-135	9.40	20	L594224-01	WG611956
1,2,3-Trichloropropane	mg/l	0.0236	0.0250	94.2	74-137	5.85	20	L594224-01	WG611956
1,2,3-Trimethylbenzene	mg/l	0.0205	0.0237	82.0	67-133	14.7	20	L594224-01	WG611956
1,2,4-Trichlorobenzene	mg/l	0.0230	0.0250	91.8	67-133	8.29	20	L594224-01	WG611956
1,2,4-Trimethylbenzene	mg/l	0.0223	0.0242	89.0	62-141	8.30	20	L594224-01	WG611956

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YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dibromo-3-Chloropropane	mg/l	0.0247	0.0255	98.9	55-148	3.26	22	L594224-01	WG611956	
1,2-Dibromoethane	mg/l	0.0231	0.0255	92.5	71-129	9.58	20	L594224-01	WG611956	
1,2-Dichlorobenzene	mg/l	0.0216	0.0242	86.4	75-125	11.3	20	L594224-01	WG611956	
1,2-Dichloroethane	mg/l	0.0227	0.0247	90.7	59-135	8.68	20	L594224-01	WG611956	
1,2-Dichloropropane	mg/l	0.0222	0.0244	88.8	68-126	9.49	20	L594224-01	WG611956	
1,3,5-Trimethylbenzene	mg/l	0.0231	0.0249	92.2	67-136	7.57	20	L594224-01	WG611956	
1,3-Dichlorobenzene	mg/l	0.0222	0.0239	88.6	69-131	7.47	20	L594224-01	WG611956	
1,3-Dichloropropane	mg/l	0.0218	0.0242	87.3	70-122	10.2	20	L594224-01	WG611956	
1,4-Dichlorobenzene	mg/l	0.0212	0.0237	84.8	70-123	11.2	20	L594224-01	WG611956	
2,2-Dichloropropane	mg/l	0.0240	0.0251	96.0	51-141	4.34	20	L594224-01	WG611956	
2-Butanone (MEK)	mg/l	0.129	0.132	103.	51-149	2.46	22	L594224-01	WG611956	
2-Chloroethyl vinyl ether	mg/l	0.000305	0.000324	0.244*	10-161	6.14	40	L594224-01	WG611956	
2-Chlorotoluene	mg/l	0.0225	0.0243	89.8	65-133	7.84	20	L594224-01	WG611956	
4-Chlorotoluene	mg/l	0.0223	0.0238	89.1	67-129	6.64	20	L594224-01	WG611956	
4-Methyl-2-pentanone (MIBK)	mg/l	0.132	0.135	106.	53-154	2.10	21	L594224-01	WG611956	
Acetone	mg/l	0.113	0.116	90.1	34-146	3.01	22	L594224-01	WG611956	
Acrolein	mg/l	0.127	0.132	102.	10-189	3.76	30	L594224-01	WG611956	
Acrylonitrile	mg/l	0.132	0.135	106.	49-162	1.67	20	L594224-01	WG611956	
Benzene	mg/l	0.0228	0.0240	91.2	51-134	5.04	20	L594224-01	WG611956	
Bromobenzene	mg/l	0.0221	0.0240	88.6	64-130	8.19	20	L594224-01	WG611956	
Bromodichloromethane	mg/l	0.0224	0.0246	89.5	67-132	9.47	20	L594224-01	WG611956	
Bromoform	mg/l	0.0236	0.0254	94.5	59-137	7.35	20	L594224-01	WG611956	
Bromomethane	mg/l	0.0240	0.0260	96.1	23-177	7.94	21	L594224-01	WG611956	
Carbon tetrachloride	mg/l	0.0243	0.0243	97.4	49-140	0.210	20	L594224-01	WG611956	
Chlorobenzene	mg/l	0.0225	0.0241	89.9	69-126	7.08	20	L594224-01	WG611956	
Chlorodibromomethane	mg/l	0.0223	0.0248	89.4	68-130	10.3	20	L594224-01	WG611956	
Chloroethane	mg/l	0.0257	0.0261	103.	32-177	1.63	21	L594224-01	WG611956	
Chloroform	mg/l	0.0234	0.0249	93.7	64-130	5.98	20	L594224-01	WG611956	
Chloromethane	mg/l	0.0235	0.0240	94.0	27-155	2.03	20	L594224-01	WG611956	
cis-1,2-Dichloroethene	mg/l	0.0226	0.0240	90.4	54-137	6.01	20	L594224-01	WG611956	
cis-1,3-Dichloropropene	mg/l	0.0214	0.0238	85.7	63-127	10.7	20	L594224-01	WG611956	
Di-isopropyl ether	mg/l	0.0231	0.0262	92.2	58-133	12.8	20	L594224-01	WG611956	
Dibromomethane	mg/l	0.0232	0.0254	92.9	68-131	8.91	20	L594224-01	WG611956	
Dichlorodifluoromethane	mg/l	0.0249	0.0245	99.6	16-188	1.41	22	L594224-01	WG611956	
Ethylbenzene	mg/l	0.0230	0.0246	92.1	64-135	6.66	20	L594224-01	WG611956	
Hexachloro-1,3-butadiene	mg/l	0.0229	0.0236	91.4	64-140	3.01	20	L594224-01	WG611956	
Isopropylbenzene	mg/l	0.0256	0.0272	102.	62-134	6.18	20	L594224-01	WG611956	
Methyl tert-butyl ether	mg/l	0.0243	0.0270	97.2	55-136	10.4	20	L594224-01	WG611956	
Methylene Chloride	mg/l	0.0216	0.0233	86.2	52-130	7.93	20	L594224-01	WG611956	
n-Butylbenzene	mg/l	0.0225	0.0233	90.0	62-142	3.31	20	L594224-01	WG611956	
n-Propylbenzene	mg/l	0.0229	0.0237	91.7	62-137	3.38	20	L594224-01	WG611956	
Naphthalene	mg/l	0.0235	0.0250	94.2	65-140	5.87	20	L594224-01	WG611956	
p-Isopropyltoluene	mg/l	0.0241	0.0252	96.4	64-142	4.36	20	L594224-01	WG611956	
sec-Butylbenzene	mg/l	0.0236	0.0249	94.3	67-139	5.59	20	L594224-01	WG611956	
Styrene	mg/l	0.0215	0.0238	86.0	58-152	10.1	20	L594224-01	WG611956	
tert-Butylbenzene	mg/l	0.0238	0.0254	95.3	66-139	6.43	20	L594224-01	WG611956	
Tetrachloroethene	mg/l	0.0226	0.0229	90.5	56-139	1.21	20	L594224-01	WG611956	
Toluene	mg/l	0.0228	0.0243	91.2	61-126	6.56	20	L594224-01	WG611956	
trans-1,2-Dichloroethene	mg/l	0.0232	0.0240	92.7	45-137	3.29	20	L594224-01	WG611956	
trans-1,3-Dichloropropene	mg/l	0.0215	0.0241	85.8	59-130	11.7	20	L594224-01	WG611956	
Trichloroethene	mg/l	0.0221	0.0226	88.4	40-155	2.30	20	L594224-01	WG611956	
Trichlorofluoromethane	mg/l	0.0259	0.0245	104.	35-177	5.40	23	L594224-01	WG611956	
Vinyl chloride	mg/l	0.0253	0.0250	101.	32-159	1.11	21	L594224-01	WG611956	
Xylenes, Total	mg/l	0.0681	0.0727	90.8	64-133	6.57	20	L594224-01	WG611956	
4-Bromofluorobenzene				101.7	82-120				WG611956	
Dibromofluoromethane				103.2	82-126				WG611956	
Toluene-d8				103.9	92-112				WG611956	

\* 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**

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L594224

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

September 19, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/l	0.00299	0.00298	99.7	70-130	0.335	20	L594224-01	WG611975
Ethane	mg/l	0.691	0.682	107.	70-130	1.33	25	L594625-02	WG612418
Ethene	mg/l	0.662	0.655	104.	70-130	1.10	25	L594625-02	WG612418
Methane	mg/l	0.342	0.339	101.	70-130	0.770	25	L594625-02	WG612418
Alkalinity	mg/l	490.	500.	40.0*	80-120	2.02	20	L594224-01	WG612248
TOC (Total Organic Carbon)	mg/l	1830	1880	102.	80-120	2.37	20	L593857-04	WG612253
Chloride	mg/l	64.3	64.1	98.6	80-120	0.312	20	L594395-01	WG612172
Fluoride	mg/l	4.99	4.97	97.6	80-120	0.402	20	L594395-01	WG612172
Sulfate	mg/l	66.1	66.1	100.	80-120	0	20	L594395-01	WG612172
Antimony, Dissolved	mg/l	0.0538	0.0544	108.	75-125	1.11	20	L594224-01	WG612880
Arsenic, Dissolved	mg/l	0.0524	0.0538	102.	75-125	2.64	20	L594224-01	WG612880
Molybdenum, Dissolved	mg/l	0.0514	0.0516	95.4	75-125	0.388	20	L594224-01	WG612880
Selenium, Dissolved	mg/l	0.0601	0.0628	106.	75-125	4.39	20	L594224-01	WG612880
Mercury, Dissolved	mg/l	0.00281	0.00284	93.7	70-130	1.06	30	L594224-01	WG612402
Barium, Dissolved	mg/l	1.09	1.09	103.	75-125	0	20	L594520-01	WG612985
Boron, Dissolved	mg/l	1.46	1.45	101.	75-125	0.687	20	L594520-01	WG612985
Calcium, Dissolved	mg/l	135.	130.	150.*	75-125	3.77	20	L594520-01	WG612985
Chromium, Dissolved	mg/l	1.03	1.02	103.	75-125	0.976	20	L594520-01	WG612985
Copper, Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L594520-01	WG612985
Iron, Dissolved	mg/l	4.92	4.87	103.	75-125	1.02	20	L594520-01	WG612985
Magnesium, Dissolved	mg/l	59.1	58.7	111.	75-125	0.679	20	L594520-01	WG612985
Manganese, Dissolved	mg/l	1.43	1.43	103.	75-125	0	20	L594520-01	WG612985
Nickel, Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L594520-01	WG612985
Potassium, Dissolved	mg/l	18.5	18.1	102.	75-125	2.19	20	L594520-01	WG612985
Silicon, Dissolved	mg/l	13.8	13.7	110.	75-125	0.727	20	L594520-01	WG612985
Sodium, Dissolved	mg/l	60.2	59.0	104.	75-125	2.01	20	L594520-01	WG612985
Strontium, Dissolved	mg/l	1.22	1.20	103.	75-125	1.65	20	L594520-01	WG612985
Vanadium, Dissolved	mg/l	1.00	1.01	100.	75-125	0.995	20	L594520-01	WG612985
Zinc, Dissolved	mg/l	1.10	1.11	106.	75-125	0.905	20	L594520-01	WG612985
Lithium, Dissolved	mg/l	0.562	0.567	103.	75-125	0.886	20	L595020-01	WG613202

Batch number /Run number / Sample number cross reference

WG611964: R2339893: L594224-01  
WG611956: R2341093: L594224-01  
WG611975: R2341373: L594224-01  
WG612418: R2344075: L594224-01  
WG612248: R2344113: L594224-01  
WG612245: R2344333: L594224-01  
WG612249: R2344353: L594224-01  
WG612253: R2346533: L594224-01  
WG612480: R2346693: L594224-01

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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Parachute, CO 81635

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Level II

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Est. 1970

September 19, 2012

WG612172: R2347513: L594224-01  
WG612335: R2348173: L594224-01  
WG612653: R2348277: L594224-01  
WG612880: R2348735: L594224-01  
WG612402: R2348773: L594224-01  
WG612215: R2348778: L594224-01  
WG612486: R2350433: L594224-01  
WG612985: R2350614: L594224-01  
WG613202: R2353153: L594224-01

\* \* 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.'



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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.



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Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593600

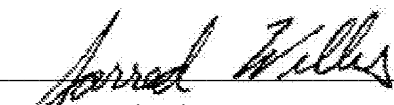
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	2.2	1.0	mg/l	9056	09/07/12	1
Chloride	680	10.	mg/l	9056	09/07/12	10
Fluoride	2.8	0.10	mg/l	9056	09/10/12	1
Sulfate	530	50.	mg/l	9056	09/07/12	10
Alkalinity	290	20.	mg/l	2320B	09/11/12	1
Alkalinity,Bicarbonate	290	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	3.1	0.10	mg/l	RSK175	09/07/12	10
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.0		su	9040C	09/11/12	1
Specific Conductance	4000		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	7.2	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	2200	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.017	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.044	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.0050	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Barium,Dissolved	0.069	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	67.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.096	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	3.6	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	0.11	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.8	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	4.3	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	790	0.50	mg/l	200.7	09/13/12	1
Strontium,Dissolved	2.2	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	0.17	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.1		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	94.9		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	108.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	107.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c



REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593600-01 (PH) - 8.0@16.1c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : LL0Y2WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 12:45

ESC Sample # : L593600-01

Site ID : LL0Y2WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	54.9		% Rec.	8270 C	09/10/12	1
Phenol-d5	35.9		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	67.1		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	77.9		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	73.9		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	94.7		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:39  
L593600-01 (PH) - 8.0@16.1c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593600-01	WG611870	SAMP	pH	R2339874	T8
	WG612100	SAMP	Selenium,Dissolved	R2347893	J3
	WG611581	SAMP	Benzidine	R2340113	J3

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:39:56

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593600-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
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Level II

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(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12

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Quality Assurance Report  
Level II

L593600

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cobalt, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium, Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium, Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel, Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon, Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium, Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium, Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc, Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium, Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic, Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum, Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858
Mercury, Dissolved	mg/l	0	0		0	20	L593600-01	WG611391
Barium, Dissolved	mg/l	0.0330	0.0342		3.87	20	L593221-01	WG612075
Boron, Dissolved	mg/l	0	0.0533		NA	0	L593221-01	WG612075
Calcium, Dissolved	mg/l	38.0	38.0		0	20	L593221-01	WG612075

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310

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Est. 1970

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Analyte	Units	Laboratory Control	Sample	% Rec	Limit	Batch
		Known Val	Result			
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzydine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581

\* Performance of this Analyte is outside of established criteria.

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury, Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron, Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt, Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper, Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium, Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium, Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese, Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel, Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium, Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon, Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium, Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium, Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium, Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc, Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony, Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium, Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310

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Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310
Trichloroethene	mg/l	0.0276	0.0282	110.	69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0	53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0	55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.	77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9	82-120			WG611310
Dibromofluoromethane				90.87	82-126			WG611310
Toluene-d8				100.9	92-112			WG611310

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581
Acenaphthylene	mg/l	0.00554	0.00670	55.0		34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0		48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0		10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0		46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0		39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0		39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0		42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0		42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0		10-178	21.9	40	WG611581

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Est. 1970

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310

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Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310
Toluene-d8					101.0	92-112		WG611310
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421

TPH (GC/FID) Low Fraction mg/l 5.92 0 5.5 108. 55-109 L593663-01 WG611405

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
a,a,a-Trifluorotoluene(FID)					105.2	62-128		
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310

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**YOUR LAB OF CHOICE**

Encana  
Aaron Stacy  
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Parachute, CO 81635

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L593600

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310	
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310	
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310	
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310	
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310	
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310	
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310	
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310	
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310	
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310	
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310	
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310	
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310	
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310	
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310	
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310	
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310	
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310	
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310	
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310	
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310	
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310	
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310	
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310	
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310	
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310	
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310	
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310	
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310	
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310	
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310	
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310	
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310	
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310	
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310	
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310	
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310	
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310	
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310	
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310	
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310	
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310	
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310	
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310	
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310	
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310	
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310	
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310	
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310	
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310	
4-Bromofluorobenzene				113.2	82-120				WG611310	
Dibromofluoromethane				92.21	82-126				WG611310	
Toluene-d8				100.1	92-112				WG611310	
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421	
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421	
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421	

\* Performance of this Analyte is outside of established criteria.

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



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593600

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

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593600-01  
WG611471: R2334493: L593600-01  
WG611421: R2334814: L593600-01  
WG611526: R2336033: L593600-01  
WG611405: R2337235: L593600-01  
WG611718: R2338293: L593600-01  
WG611577: R2339033: L593600-01  
WG611624: R2339313: L593600-01  
WG611507: R2339873: L593600-01  
WG611870: R2339874: L593600-01  
WG611833: R2339913: L593600-01  
WG611835: R2339973: L593600-01  
WG611838: R2339993: L593600-01

\* Performance of this Analyte is outside of established criteria.

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



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WG611581: R2340113: L593600-01  
WG611858: R2340713: L593600-01  
WG611391: R2340917: L593600-01  
WG612075: R2344074: L593600-01  
WG612100: R2347893: L593600-01

\* \* 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.'



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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.

Company Name/Address <b>Olsson Associates</b> 826 21 1/2 Road Grand Junction, CO 81505				Alternate Billing ENCANIA OIL & GAS (USA) INC. 2717 Cr 215 Suite 100 Parachute, Co. 81435 ATTN: Charles Jensen Report to: Aaron Stacy E-mail to: astacy@oaconsulting.com				Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             ALK / ALKBI / ALKCA - 500ml HDPE No Pres              Dissolved Metals - 500ml HDPE No Pres              GRO - (2) 40ml amb HCl              DRO - (2) 40ml amb HCl              RSK175 - (2) 40ml amb No Pres              TOC - 250ml amb HCl              V8260 - (3) 40ml amb HCl              SVOC8270 - (2) 100ml amb No Pres           </div> <div style="text-align: center;">             L2           </div> </div>								Chain of Custody Page <u>1</u> of <u>2</u>			
Project Description: <b>F12 Poly Release</b>								Prepared by: <b>ENVIRONMENTAL SCIENCE CORP</b> 12065 Lebanon Road Mt. Juliet TN 37122 Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859											
PHONE: 970-263-7800 FAX:		Client Project No. <b>F12 Poly Release</b>		Lab Project # <b>ENCRCO</b>															
Collected by: <b>AARON STACY</b>		Site/Facility ID# <b>LLOY2WUW</b>		P.O.#															
Collected by (signature):		<b>Rush?</b> (Lab MUST be Notified) Same Day.....200% Next Day.....100% Two Day.....50%		Date Results Needed Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes FAX? <input type="checkbox"/> No <input type="checkbox"/> Yes															
Packed on Ice N <input checked="" type="checkbox"/> Y <input type="checkbox"/>																			
Sample ID		Comp/Grab	Matrix	Depth	Date	Time	Cntrs	ALK / ALKBI / ALKCA - 500ml HDPE No Pres	Dissolved Metals - 500ml HDPE No Pres	GRO - (2) 40ml amb HCl	DRO - (2) 40ml amb HCl	RSK175 - (2) 40ml amb No Pres	TOC - 250ml amb HCl	V8260 - (3) 40ml amb HCl	SVOC8270 - (2) 100ml amb No Pres	Remarks/contaminant		Sample # (lab only)	
<b>LLOY2WUW-090512</b>		<b>Grab</b>	<b>GW</b>		<b>09/05/12</b>	<b>1245</b>	<b>17</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>L593600</b>		<b>-01</b>	
							17	X	X	X	X	X	X	X	X				

Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: Metals 200.7: Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn, Co

Flow \_\_\_\_\_ Other \_\_\_\_\_

Metals 200.8: Sb, As, Mo, Se, Plus Hg

Relinquisher by (Signature) 		Date: <b>09/05/12</b>	Time: <b>1515</b>	Received by (Signature) 		Samples returned via: FedEx <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Other _____ <b>5040 0635 5594</b>		Condition (lab use only) <b>OK MS</b>	
Relinquisher by (Signature) 		Date:	Time:	Received by (Signature) 		Temp: <b>31°C</b>		Bottles Received: <b>17</b>	
Relinquisher by (Signature) 		Date:	Time:	Received for lab by (Signature) 		Date: <b>9/6/12</b>		Time: <b>0900</b>	
						pH Checked: <b>L2</b>		NCF:	

Company Name/Address <b>Olsson Associates</b> 826 21 1/2 Road Grand Junction, CO 81505				Alternate Billing Encana Oil & Gas (USA) Inc. 2717 CR 215 Suite 100 Parachute, Co. 81635 ATTN: Charles Jensen Report to: Aaron Stacy E-mail to: astacy@oaconsulting.com				Analysis/Container/Preservative <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAR - 500ml HDPE HNO3</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Cl, F, SO4, pH - 500ml HDPE No Pres</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Bromide, SPCOND, TDS - 250ml HDPE No Pres</div> </div>				Chain of Custody Page 2 of 2  Prepared by: <b>ENVIRONMENTAL SCIENCE CORP</b> 12065 Lebanon Road Mt. Juliet TN 37122  Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859			
Project Description: F12 Poly Release															
PHONE: 970-263-7800		Client Project No. F12 Poly Release		Lab Project #											
FAX:				ENERCO											
Collected by: AARON STACY		Site/Facility ID#		P.O.#											
Collected by (signature):		<input checked="" type="checkbox"/> Rush? (Lab MUST be Notified) Same Day.....200% Next Day.....100% Two Day.....50%		Date Results Needed		No of Cntrs									
				Email? ___ No ___ Yes FAX? ___ No ___ Yes											
Packed on Ice N ___ Y <input checked="" type="checkbox"/>															
Sample ID	Comp/Grab	Matrix	Depth	Date	Time										
LL042WW-090512	Grab	GW		09/05/12	1245	17	X X X								
						17	X X X								
Remarks/contaminant						Sample # (lab only)									
L593600						-d									

Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other \_\_\_\_\_ pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquisher by: (Signature)	Date: 09/05/12	Time: 1515	Received by: (Signature)	Samples returned via: FedEx <input checked="" type="checkbox"/> UPS ___ Other ___		Condition (lab use only)
Relinquisher by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 31°C	Bottles Received: 17	
Relinquisher by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/6/12	Time: 0900	
				pH Checked:		NCF:





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Aaron Stacy (Olsson)  
Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505

## Report Summary

Sunday July 29, 2012

Report Number: L585015

Samples Received: 07/14/12

Client Project: F12E POLY RELEASE

Description: F12E Polyline Release

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:

Jayred Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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# REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	07/14/12	1
Chloride	100	20.	mg/l	9056	07/17/12	20
Fluoride	1.9	0.10	mg/l	9056	07/14/12	1
Sulfate	1200	100	mg/l	9056	07/17/12	20
Alkalinity	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Bicarbonate	230	20.	mg/l	2320B	07/16/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	07/16/12	1
Methane	BDL	0.010	mg/l	RSK175	07/17/12	1
Ethane	BDL	0.013	mg/l	RSK175	07/17/12	1
Ethene	BDL	0.013	mg/l	RSK175	07/17/12	1
pH	8.1		su	9040C	07/17/12	1
Specific Conductance	3000		umhos/cm	9050A	07/18/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	07/18/12	1
Dissolved Solids	2100	10.	mg/l	2540C	07/20/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	07/27/12	1
Arsenic,Dissolved	0.0054	0.0010	mg/l	200.8	07/27/12	1
Molybdenum,Dissolved	0.021	0.0020	mg/l	200.8	07/27/12	1
Selenium,Dissolved	0.010	0.0010	mg/l	200.8	07/27/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	07/18/12	1
Barium,Dissolved	0.013	0.0050	mg/l	200.7	07/19/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	07/19/12	1
Calcium,Dissolved	34.	0.50	mg/l	200.7	07/19/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Copper,Dissolved	0.023	0.020	mg/l	200.7	07/19/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	07/19/12	1
Lithium,Dissolved	0.039	0.015	mg/l	200.7	07/19/12	1
Magnesium,Dissolved	2.3	0.10	mg/l	200.7	07/19/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	07/19/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	07/19/12	1
Silicon,Dissolved	3.5	0.20	mg/l	200.7	07/20/12	1
Sodium,Dissolved	660	0.50	mg/l	200.7	07/19/12	1
Strontium,Dissolved	1.3	0.010	mg/l	200.7	07/19/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	07/19/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Zinc, Dissolved	BDL	0.030	mg/l	200.7	07/19/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	07/16/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.1		% Rec.	8015D/GRO	07/16/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	07/14/12	1
Acrolein	BDL	0.050	mg/l	8260B	07/14/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	07/14/12	1
Benzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromoform	BDL	0.0010	mg/l	8260B	07/14/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	07/14/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	07/14/12	1
Chloroform	BDL	0.0050	mg/l	8260B	07/14/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	07/14/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	07/14/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	07/14/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	07/14/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	07/14/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	07/14/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	07/14/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	07/14/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	07/14/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Styrene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Toluene	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	07/14/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	07/14/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	07/14/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	07/14/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	07/14/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	07/14/12	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	07/14/12	1
Dibromofluoromethane	101.		% Rec.	8260B	07/14/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	07/14/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	07/16/12	1
Surrogate recovery(%)						
o-Terphenyl	80.9		% Rec.	3511/8015	07/16/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzidine	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c



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

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	07/18/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	07/18/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	07/18/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	07/18/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	07/18/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Isophorone	BDL	0.010	mg/l	8270 C	07/18/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	07/18/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	07/18/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	07/18/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	07/18/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

REPORT OF ANALYSIS

Aaron Stacy (Olsson)  
Encana  
826 21 1/2 Road  
Grand Junction, CO 81505

July 29, 2012

Date Received : July 14, 2012  
Description : F12E Polyline Release

Sample ID : SCHU1WW-071312

Collected By : Aaron Stacy  
Collection Date : 07/13/12 10:20

ESC Sample # : L585015-01

Site ID : F12E

Project # : F12E POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Phenol	BDL	0.010	mg/l	8270 C	07/18/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	07/18/12	1
Surrogate Recovery						
2-Fluorophenol	38.1		% Rec.	8270 C	07/18/12	1
Phenol-d5	31.9		% Rec.	8270 C	07/18/12	1
Nitrobenzene-d5	72.3		% Rec.	8270 C	07/18/12	1
2-Fluorobiphenyl	80.2		% Rec.	8270 C	07/18/12	1
2,4,6-Tribromophenol	53.7		% Rec.	8270 C	07/18/12	1
p-Terphenyl-d14	82.1		% Rec.	8270 C	07/18/12	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: 07/29/12 12:29 Printed: 07/29/12 12:30

L585015-01 (ANIONS BY IC) - diluted due to Sulfate OLR masking Nitrate

L585015-01 (PH) - 8.1@20.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L585015-01	WG602929	SAMP	pH	R2259213	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  
07/29/12 at 12:30:08

TSR Signing Reports: 358

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L585015-01 Account: ENCRCO Received: 07/14/12 09:00 Due Date: 07/20/12 00:00 RPT Date: 07/29/12 12:29  
Removed NITRATE and NITRITE results per AS. jw 7/19



YOUR LAB OF CHOICE

Olsson Associates  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/l			WG602751	07/16/12 00:30
a,a,a-Trifluorotoluene(FID)		% Rec.	96.33	62-128	WG602751	07/16/12 00:30
TPH (GC/FID) High Fraction	< .1	ppm			WG602670	07/16/12 10:35
o-Terphenyl		% Rec.	83.87	50-150	WG602670	07/16/12 10:35
Bromide	< 1	mg/l			WG602614	07/14/12 06:04
Fluoride	< .1	mg/l			WG602614	07/14/12 06:04
Alkalinity	< 20	mg/l			WG602809	07/16/12 18:39
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,1-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
1,1-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,2,3-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2,4-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG602582	07/14/12 13:37
1,2-Dibromoethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloroethane	< .001	mg/l			WG602582	07/14/12 13:37
1,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,3,5-Trimethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
1,3-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
1,4-Dichlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
2,2-Dichloropropane	< .001	mg/l			WG602582	07/14/12 13:37
2-Butanone (MEK)	< .01	mg/l			WG602582	07/14/12 13:37
2-Chloroethyl vinyl ether	< .05	mg/l			WG602582	07/14/12 13:37
2-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Chlorotoluene	< .001	mg/l			WG602582	07/14/12 13:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG602582	07/14/12 13:37
Acetone	< .05	mg/l			WG602582	07/14/12 13:37
Acrolein	< .025	mg/l			WG602582	07/14/12 13:37
Acrylonitrile	< .01	mg/l			WG602582	07/14/12 13:37
Benzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Bromodichloromethane	< .001	mg/l			WG602582	07/14/12 13:37
Bromoform	< .001	mg/l			WG602582	07/14/12 13:37
Bromomethane	< .005	mg/l			WG602582	07/14/12 13:37
Carbon tetrachloride	< .001	mg/l			WG602582	07/14/12 13:37
Chlorobenzene	< .001	mg/l			WG602582	07/14/12 13:37
Chlorodibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Chloroethane	< .005	mg/l			WG602582	07/14/12 13:37
Chloroform	< .005	mg/l			WG602582	07/14/12 13:37
Chloromethane	< .0025	mg/l			WG602582	07/14/12 13:37
cis-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
cis-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37

\* 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  
Aaron Stacy (Olsson)  
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Grand Junction, CO 81505

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Level II

L585015

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Di-isopropyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Dibromomethane	< .001	mg/l			WG602582	07/14/12 13:37
Dichlorodifluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Ethylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Hexachloro-1,3-butadiene	< .001	mg/l			WG602582	07/14/12 13:37
Isopropylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Methyl tert-butyl ether	< .001	mg/l			WG602582	07/14/12 13:37
Methylene Chloride	< .005	mg/l			WG602582	07/14/12 13:37
n-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
n-Propylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Naphthalene	< .005	mg/l			WG602582	07/14/12 13:37
p-Isopropyltoluene	< .001	mg/l			WG602582	07/14/12 13:37
sec-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Styrene	< .001	mg/l			WG602582	07/14/12 13:37
tert-Butylbenzene	< .001	mg/l			WG602582	07/14/12 13:37
Tetrachloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Toluene	< .005	mg/l			WG602582	07/14/12 13:37
trans-1,2-Dichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
trans-1,3-Dichloropropene	< .001	mg/l			WG602582	07/14/12 13:37
Trichloroethene	< .001	mg/l			WG602582	07/14/12 13:37
Trichlorofluoromethane	< .005	mg/l			WG602582	07/14/12 13:37
Vinyl chloride	< .001	mg/l			WG602582	07/14/12 13:37
Xylenes, Total	< .003	mg/l			WG602582	07/14/12 13:37
4-Bromofluorobenzene		% Rec.	104.9	82-120	WG602582	07/14/12 13:37
Dibromofluoromethane		% Rec.	101.4	82-126	WG602582	07/14/12 13:37
Toluene-d8		% Rec.	104.4	92-112	WG602582	07/14/12 13:37
Ethane	< .013	mg/l			WG603037	07/17/12 13:39
Ethene	< .013	mg/l			WG603037	07/17/12 13:39
Methane	< .01	mg/l			WG603037	07/17/12 13:39
pH	5.45	su			WG602929	07/17/12 16:35
Mercury,Dissolved	< .0002	mg/l			WG602812	07/18/12 12:36
Chloride	< 1	mg/l			WG602990	07/17/12 06:44
Sulfate	< 5	mg/l			WG602990	07/17/12 06:44
TOC (Total Organic Carbon)	< 1	mg/l			WG602923	07/17/12 21:43
Specific Conductance	1.78	umhos/cm			WG603320	07/18/12 22:37
1,2,4-Trichlorobenzene	< .01	mg/l			WG602743	07/18/12 18:33
2,4,6-Trichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dichlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dimethylphenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
2,4-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2,6-Dinitrotoluene	< .01	mg/l			WG602743	07/18/12 18:33
2-Chloronaphthalene	< .001	mg/l			WG602743	07/18/12 18:33
2-Chlorophenol	< .01	mg/l			WG602743	07/18/12 18:33
2-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33

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Quality Assurance Report  
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L585015

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Est. 1970

July 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
3,3-Dichlorobenzidine	< .01	mg/l			WG602743	07/18/12 18:33
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Bromophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Chloro-3-methylphenol	< .01	mg/l			WG602743	07/18/12 18:33
4-Chlorophenyl-phenylether	< .01	mg/l			WG602743	07/18/12 18:33
4-Nitrophenol	< .01	mg/l			WG602743	07/18/12 18:33
Acenaphthene	< .001	mg/l			WG602743	07/18/12 18:33
Acenaphthylene	< .001	mg/l			WG602743	07/18/12 18:33
Anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzidine	< .01	mg/l			WG602743	07/18/12 18:33
Benzo(a)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(a)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(b)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(g,h,i)perylene	< .001	mg/l			WG602743	07/18/12 18:33
Benzo(k)fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Benzylbutyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Bis(2-chlorethoxy)methane	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroethyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG602743	07/18/12 18:33
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Chrysene	< .001	mg/l			WG602743	07/18/12 18:33
Di-n-butyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Di-n-octyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dibenz(a,h)anthracene	< .001	mg/l			WG602743	07/18/12 18:33
Diethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Dimethyl phthalate	< .003	mg/l			WG602743	07/18/12 18:33
Fluoranthene	< .001	mg/l			WG602743	07/18/12 18:33
Fluorene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachloro-1,3-butadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachlorobenzene	< .001	mg/l			WG602743	07/18/12 18:33
Hexachlorocyclopentadiene	< .01	mg/l			WG602743	07/18/12 18:33
Hexachloroethane	< .01	mg/l			WG602743	07/18/12 18:33
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG602743	07/18/12 18:33
Isophorone	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodi-n-propylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodimethylamine	< .01	mg/l			WG602743	07/18/12 18:33
n-Nitrosodiphenylamine	< .01	mg/l			WG602743	07/18/12 18:33
Naphthalene	< .001	mg/l			WG602743	07/18/12 18:33
Nitrobenzene	< .01	mg/l			WG602743	07/18/12 18:33
Pentachlorophenol	< .001	mg/l			WG602743	07/18/12 18:33
Phenanthrene	< .001	mg/l			WG602743	07/18/12 18:33
Phenol	< .01	mg/l			WG602743	07/18/12 18:33
Pyrene	< .001	mg/l			WG602743	07/18/12 18:33
2,4,6-Tribromophenol		% Rec.	71.82	16-147	WG602743	07/18/12 18:33
2-Fluorobiphenyl		% Rec.	79.34	29-127	WG602743	07/18/12 18:33
2-Fluorophenol		% Rec.	33.51	10-75	WG602743	07/18/12 18:33
Nitrobenzene-d5		% Rec.	67.78	17-119	WG602743	07/18/12 18:33
Phenol-d5		% Rec.	25.83	10-63	WG602743	07/18/12 18:33
p-Terphenyl-d14		% Rec.	80.24	40-174	WG602743	07/18/12 18:33
Dissolved Solids	< 10	mg/l			WG603124	07/20/12 10:29
Barium,Dissolved	< .005	mg/l			WG603226	07/19/12 03:12
Boron,Dissolved	< .2	mg/l			WG603226	07/19/12 03:12
Calcium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Chromium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Cobalt,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Copper,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Iron,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Lithium,Dissolved	< .015	mg/l			WG603226	07/19/12 03:12
Magnesium,Dissolved	< .1	mg/l			WG603226	07/19/12 03:12
Manganese,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Nickel,Dissolved	< .02	mg/l			WG603226	07/19/12 03:12
Potassium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Sodium,Dissolved	< .5	mg/l			WG603226	07/19/12 03:12
Strontium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Vanadium,Dissolved	< .01	mg/l			WG603226	07/19/12 03:12
Zinc,Dissolved	< .03	mg/l			WG603226	07/19/12 03:12
Silicon,Dissolved	< .2	mg/l			WG603226	07/20/12 00:37
Antimony,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Arsenic,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00
Molybdenum,Dissolved	< .002	mg/l			WG604526	07/27/12 15:00
Selenium,Dissolved	< .001	mg/l			WG604526	07/27/12 15:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
Bromide	mg/l	0	0	0	20	L584609-10	WG602614
Fluoride	mg/l	4.60	4.60	0.436	20	L584524-23	WG602614
Alkalinity	mg/l	270.	290.	6.04	20	L585005-01	WG602809
pH	su	7.90	7.80	0.766	1	L584225-04	WG602929
pH	su	7.10	7.20	1.40*	1	L585168-03	WG602929
Mercury,Dissolved	mg/l	0	0	0	20	L585012-01	WG602812
Chloride	mg/l	100.	100.	0.995	20	L585015-01	WG602990
Sulfate	mg/l	1200	1200	1.68	20	L585015-01	WG602990
Sulfate	mg/l	1800	1800	0.557	20	L585249-01	WG602990
TOC (Total Organic Carbon)	mg/l	1.40	1.40	2.90	20	L584810-01	WG602923
TOC (Total Organic Carbon)	mg/l	0	0	0	20	L585165-01	WG602923
Specific Conductance	umhos/cm	14000	14000	2.90	20	L584999-01	WG603320
Specific Conductance	umhos/cm	25000	25000	1.61	20	L585495-04	WG603320
Dissolved Solids	mg/l	200.	199.	1.00	5	L585421-01	WG603124
Barium,Dissolved	mg/l	0.0690	0.0691	0.145	20	L584609-12	WG603226
Boron,Dissolved	mg/l	0	0	0	0	L584609-12	WG603226
Calcium,Dissolved	mg/l	37.0	37.0	0.808	20	L584609-12	WG603226
Chromium,Dissolved	mg/l	0	0.00240	NA	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	0	0.000400	NA	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0	0.000100	NA	20	L584609-12	WG603226
Iron,Dissolved	mg/l	0	0	0	20	L584609-12	WG603226

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Lithium,Dissolved	mg/l	0	0		0	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	11.0	11.0		0.913	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	0	0		0	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0	0		0	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	1.80	1.90		4.30	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	6.10	6.10		0.491	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	0.150	0.147		0	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	0	0.00720		NA	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	0	0.00340		NA	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	2.50	2.50		1.19*	0	L584609-12	WG603226
Antimony,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0	0.000550		NA	0	L585179-01	WG604526
Selenium,Dissolved	mg/l	0	0		0	20	L585179-01	WG604526

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/l	5.5	6.62	120.	70-124	WG602751
a,a,a-Trifluorotoluene(FID)				98.87	62-128	WG602751
TPH (GC/FID) High Fraction	mg/l	1.5	1.52	102.	50-150	WG602670
o-Terphenyl				89.92	50-150	WG602670
Bromide	mg/l	40	40.4	101.	90-110	WG602614
Fluoride	mg/l	8	8.06	101.	90-110	WG602614
Alkalinity	mg/l	100	110.	110.	85-115	WG602809
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0254	102.	77-128	WG602582
1,1,1-Trichloroethane	mg/l	.025	0.0237	94.7	71-126	WG602582
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0231	92.5	78-130	WG602582
1,1,2-Trichloroethane	mg/l	.025	0.0242	96.8	81-121	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0242	96.8	53-143	WG602582
1,1-Dichloroethane	mg/l	.025	0.0221	88.5	73-123	WG602582
1,1-Dichloroethene	mg/l	.025	0.0229	91.6	54-134	WG602582
1,1-Dichloropropene	mg/l	.025	0.0236	94.5	67-127	WG602582
1,2,3-Trichlorobenzene	mg/l	.025	0.0238	95.2	77-130	WG602582
1,2,3-Trichloropropane	mg/l	.025	0.0229	91.4	68-130	WG602582
1,2,3-Trimethylbenzene	mg/l	.025	0.0242	96.7	77-126	WG602582
1,2,4-Trichlorobenzene	mg/l	.025	0.0250	100.	76-127	WG602582
1,2,4-Trimethylbenzene	mg/l	.025	0.0254	102.	77-129	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0192	77.0	55-142	WG602582
1,2-Dibromoethane	mg/l	.025	0.0248	99.2	78-124	WG602582
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG602582
1,2-Dichloroethane	mg/l	.025	0.0227	90.7	69-128	WG602582
1,2-Dichloropropane	mg/l	.025	0.0235	93.9	77-121	WG602582
1,3,5-Trimethylbenzene	mg/l	.025	0.0256	102.	78-127	WG602582
1,3-Dichlorobenzene	mg/l	.025	0.0261	104.	77-127	WG602582
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	78-117	WG602582
1,4-Dichlorobenzene	mg/l	.025	0.0241	96.3	79-117	WG602582
2,2-Dichloropropane	mg/l	.025	0.0221	88.2	63-130	WG602582
2-Butanone (MEK)	mg/l	.125	0.104	83.2	58-144	WG602582

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2-Chloroethyl vinyl ether	mg/l	.125	0.0860	68.8	26-172	WG602582
2-Chlorotoluene	mg/l	.025	0.0253	101.	78-123	WG602582
4-Chlorotoluene	mg/l	.025	0.0254	102.	78-122	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.104	82.9	58-147	WG602582
Acetone	mg/l	.125	0.109	87.4	49-153	WG602582
Acrolein	mg/l	.125	0.112	89.5	10-181	WG602582
Acrylonitrile	mg/l	.125	0.109	87.2	53-153	WG602582
Benzene	mg/l	.025	0.0241	96.2	72-119	WG602582
Bromobenzene	mg/l	.025	0.0249	99.8	76-121	WG602582
Bromodichloromethane	mg/l	.025	0.0231	92.6	75-127	WG602582
Bromoform	mg/l	.025	0.0240	95.9	61-136	WG602582
Bromomethane	mg/l	.025	0.0271	108.	42-172	WG602582
Carbon tetrachloride	mg/l	.025	0.0218	87.2	63-129	WG602582
Chlorobenzene	mg/l	.025	0.0258	103.	78-123	WG602582
Chlorodibromomethane	mg/l	.025	0.0256	102.	73-128	WG602582
Chloroethane	mg/l	.025	0.0285	114.	52-164	WG602582
Chloroform	mg/l	.025	0.0238	95.1	76-122	WG602582
Chloromethane	mg/l	.025	0.0242	96.8	50-141	WG602582
cis-1,2-Dichloroethene	mg/l	.025	0.0214	85.7	75-121	WG602582
cis-1,3-Dichloropropene	mg/l	.025	0.0233	93.2	74-124	WG602582
Di-isopropyl ether	mg/l	.025	0.0242	96.8	66-129	WG602582
Dibromomethane	mg/l	.025	0.0232	93.0	77-124	WG602582
Dichlorodifluoromethane	mg/l	.025	0.0224	89.6	33-173	WG602582
Ethylbenzene	mg/l	.025	0.0261	104.	77-124	WG602582
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	101.	71-134	WG602582
Isopropylbenzene	mg/l	.025	0.0258	103.	74-126	WG602582
Methyl tert-butyl ether	mg/l	.025	0.0206	82.6	67-127	WG602582
Methylene Chloride	mg/l	.025	0.0236	94.4	67-122	WG602582
n-Butylbenzene	mg/l	.025	0.0245	98.1	74-130	WG602582
n-Propylbenzene	mg/l	.025	0.0257	103.	77-125	WG602582
Naphthalene	mg/l	.025	0.0223	89.0	70-134	WG602582
p-Isopropyltoluene	mg/l	.025	0.0263	105.	77-132	WG602582
sec-Butylbenzene	mg/l	.025	0.0260	104.	77-130	WG602582
Styrene	mg/l	.025	0.0266	106.	69-145	WG602582
tert-Butylbenzene	mg/l	.025	0.0263	105.	76-131	WG602582
Tetrachloroethene	mg/l	.025	0.0268	107.	69-131	WG602582
Toluene	mg/l	.025	0.0229	91.4	75-114	WG602582
trans-1,2-Dichloroethene	mg/l	.025	0.0235	94.1	63-127	WG602582
trans-1,3-Dichloropropene	mg/l	.025	0.0228	91.1	69-124	WG602582
Trichloroethene	mg/l	.025	0.0248	99.1	69-131	WG602582
Trichlorofluoromethane	mg/l	.025	0.0258	103.	53-161	WG602582
Vinyl chloride	mg/l	.025	0.0247	99.0	55-142	WG602582
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG602582
4-Bromofluorobenzene				105.2	82-120	WG602582
Dibromofluoromethane				103.3	82-126	WG602582
Toluene-d8				104.7	92-112	WG602582
Ethane	mg/l	.645	0.736	114.	70-130	WG603037
Ethene	mg/l	.635	0.713	112.	70-130	WG603037
Methane	mg/l	.339	0.380	112.	70-130	WG603037
pH	su	5.7	5.79	102.*	98-101	WG602929
Mercury,Dissolved	mg/l	.003	0.00283	94.3	85-115	WG602812

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chloride	mg/l	40	40.0	100.	90-110	WG602990
Sulfate	mg/l	40	38.8	97.0	90-110	WG602990
TOC (Total Organic Carbon)	mg/l	75	77.8	104.	85-115	WG602923
Specific Conductance	umhos/cm	495	507.	102.	85-115	WG603320
1,2,4-Trichlorobenzene	mg/l	.01	0.00514	51.4	18-130	WG602743
2,4,6-Trichlorophenol	mg/l	.01	0.00694	69.4	12-147	WG602743
2,4-Dichlorophenol	mg/l	.01	0.00633	63.3	10-157	WG602743
2,4-Dimethylphenol	mg/l	.01	0.00636	63.6	19-160	WG602743
2,4-Dinitrophenol	mg/l	.01	0.00827	82.7	10-135	WG602743
2,4-Dinitrotoluene	mg/l	.01	0.00634	63.4	30-168	WG602743
2,6-Dinitrotoluene	mg/l	.01	0.00642	64.2	32-163	WG602743
2-Chloronaphthalene	mg/l	.01	0.00687	68.7	29-149	WG602743
2-Chlorophenol	mg/l	.01	0.00549	54.9	16-129	WG602743
2-Nitrophenol	mg/l	.01	0.00611	61.1	14-158	WG602743
3,3-Dichlorobenzidine	mg/l	.01	0.00789	78.9	42-150	WG602743
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00943	94.3	10-164	WG602743
4-Bromophenyl-phenylether	mg/l	.01	0.00780	78.0	40-166	WG602743
4-Chloro-3-methylphenol	mg/l	.01	0.00624	62.4	14-158	WG602743
4-Chlorophenyl-phenylether	mg/l	.01	0.00749	74.9	39-155	WG602743
4-Nitrophenol	mg/l	.01	0.00152	15.2	10-61	WG602743
Acenaphthene	mg/l	.01	0.00743	74.3	37-159	WG602743
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG602743
Anthracene	mg/l	.01	0.00780	78.0	48-167	WG602743
Benizidine	mg/l	.01	0.00417	41.7	10-86	WG602743
Benzo(a)anthracene	mg/l	.01	0.00814	81.4	46-167	WG602743
Benzo(a)pyrene	mg/l	.01	0.00746	74.6	39-167	WG602743
Benzo(b)fluoranthene	mg/l	.01	0.00827	82.7	39-173	WG602743
Benzo(g,h,i)perylene	mg/l	.01	0.00864	86.4	42-181	WG602743
Benzo(k)fluoranthene	mg/l	.01	0.00799	79.9	42-178	WG602743
Benzylbutyl phthalate	mg/l	.01	0.00735	73.5	10-178	WG602743
Bis(2-chlorethoxy)methane	mg/l	.01	0.00723	72.3	34-155	WG602743
Bis(2-chloroethyl)ether	mg/l	.01	0.00644	64.4	22-149	WG602743
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00775	77.5	42-191	WG602743
Chrysene	mg/l	.01	0.00883	88.3	46-170	WG602743
Di-n-butyl phthalate	mg/l	.01	0.00731	73.1	33-175	WG602743
Di-n-octyl phthalate	mg/l	.01	0.00733	73.3	40-170	WG602743
Dibenz(a,h)anthracene	mg/l	.01	0.00823	82.3	43-187	WG602743
Diethyl phthalate	mg/l	.01	0.00848	84.8	10-182	WG602743
Dimethyl phthalate	mg/l	.01	0.00809	80.9	10-165	WG602743
Fluoranthene	mg/l	.01	0.00788	78.8	46-171	WG602743
Fluorene	mg/l	.01	0.00753	75.3	39-163	WG602743
Hexachloro-1,3-butadiene	mg/l	.01	0.00459	45.9	18-136	WG602743
Hexachlorobenzene	mg/l	.01	0.00784	78.4	38-163	WG602743
Hexachlorocyclopentadiene	mg/l	.01	0.00781	78.1	10-142	WG602743
Hexachloroethane	mg/l	.01	0.00409	40.9	10-130	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00833	83.3	42-184	WG602743
Isophorone	mg/l	.01	0.00675	67.5	36-166	WG602743
n-Nitrosodi-n-propylamine	mg/l	.01	0.00642	64.2	27-157	WG602743
n-Nitrosodimethylamine	mg/l	.01	0.00428	42.8	10-96	WG602743
n-Nitrosodiphenylamine	mg/l	.01	0.00799	79.9	41-168	WG602743
Naphthalene	mg/l	.01	0.00635	63.5	26-147	WG602743
Nitrobenzene	mg/l	.01	0.00645	64.5	22-154	WG602743

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Pentachlorophenol	mg/l	.01	0.00553	55.3	10-128	WG602743
Phenanthrene	mg/l	.01	0.00815	81.5	46-163	WG602743
Phenol	mg/l	.01	0.00300	30.0	10-69	WG602743
Pyrene	mg/l	.01	0.00812	81.2	45-176	WG602743
2,4,6-Tribromophenol				76.10	16-147	WG602743
2-Fluorobiphenyl				71.31	29-127	WG602743
2-Fluorophenol				35.24	10-75	WG602743
Nitrobenzene-d5				65.24	17-119	WG602743
Phenol-d5				25.30	10-63	WG602743
p-Terphenyl-d14				78.57	40-174	WG602743
Dissolved Solids	mg/l	8800	8830	100.	85-115	WG603124
Barium,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Boron,Dissolved	mg/l	1	0.931	93.1	85-115	WG603226
Calcium,Dissolved	mg/l	10	10.1	101.	85-115	WG603226
Chromium,Dissolved	mg/l	1	1.04	104.	85-115	WG603226
Cobalt,Dissolved	mg/l	1	1.05	105.	85-115	WG603226
Copper,Dissolved	mg/l	1	0.990	99.0	85-115	WG603226
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG603226
Lithium,Dissolved	mg/l	.5	0.538	108.	85-115	WG603226
Magnesium,Dissolved	mg/l	10	10.2	102.	85-115	WG603226
Manganese,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Nickel,Dissolved	mg/l	1	0.918	91.8	85-115	WG603226
Potassium,Dissolved	mg/l	10	9.95	99.5	85-115	WG603226
Sodium,Dissolved	mg/l	10	10.3	103.	85-115	WG603226
Strontium,Dissolved	mg/l	1	1.00	100.	85-115	WG603226
Vanadium,Dissolved	mg/l	1	0.987	98.7	85-115	WG603226
Zinc,Dissolved	mg/l	1	1.02	102.	85-115	WG603226
Silicon,Dissolved	mg/l	1	1.12	112.	85-115	WG603226
Antimony,Dissolved	mg/l	.05	0.0482	96.4	85-115	WG604526
Arsenic,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG604526
Molybdenum,Dissolved	mg/l	.05	0.0521	104.	85-115	WG604526
Selenium,Dissolved	mg/l	.05	0.0455	91.0	85-115	WG604526

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) Low Fraction	mg/l	6.10	6.62	111.	70-124	8.27	20	WG602751
a,a,a-Trifluorotoluene(FID)				98.52	62-128			WG602751
TPH (GC/FID) High Fraction	mg/l	1.55	1.52	104.	50-150	1.87	20	WG602670
o-Terphenyl				92.03	50-150			WG602670
Bromide	mg/l	40.4	40.4	101.	90-110	0	20	WG602614
Fluoride	mg/l	8.05	8.06	101.	90-110	0.124	20	WG602614
Alkalinity	mg/l	110.	110.	110.	85-115	0	20	WG602809
1,1,1,2-Tetrachloroethane	mg/l	0.0281	0.0254	112.	77-128	9.97	20	WG602582
1,1,1-Trichloroethane	mg/l	0.0259	0.0237	104.	71-126	9.05	20	WG602582

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Analyte	Laboratory Control			Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec					
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0231	100.		78-130	7.96	20	WG602582
1,1,2-Trichloroethane	mg/l	0.0270	0.0242	108.		81-121	11.1	20	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0263	0.0242	105.		53-143	8.40	20	WG602582
1,1-Dichloroethane	mg/l	0.0241	0.0221	96.0		73-123	8.63	20	WG602582
1,1-Dichloroethene	mg/l	0.0249	0.0229	100.		54-134	8.50	20	WG602582
1,1-Dichloropropene	mg/l	0.0260	0.0236	104.		67-127	9.66	20	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0260	0.0238	104.		77-130	8.73	20	WG602582
1,2,3-Trichloropropane	mg/l	0.0249	0.0229	100.		68-130	8.77	20	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0269	0.0242	108.		77-126	10.9	20	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0284	0.0250	114.		76-127	12.7	20	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0254	114.		77-129	11.3	20	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0215	0.0192	86.0		55-142	11.2	20	WG602582
1,2-Dibromoethane	mg/l	0.0273	0.0248	109.		78-124	9.51	20	WG602582
1,2-Dichlorobenzene	mg/l	0.0269	0.0245	108.		82-121	9.58	20	WG602582
1,2-Dichloroethane	mg/l	0.0243	0.0227	97.0		69-128	7.13	20	WG602582
1,2-Dichloropropane	mg/l	0.0258	0.0235	103.		77-121	9.55	20	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0282	0.0256	113.		78-127	9.76	20	WG602582
1,3-Dichlorobenzene	mg/l	0.0292	0.0261	117.		77-127	11.2	20	WG602582
1,3-Dichloropropane	mg/l	0.0259	0.0238	104.		78-117	8.30	20	WG602582
1,4-Dichlorobenzene	mg/l	0.0270	0.0241	108.		79-117	11.4	20	WG602582
2,2-Dichloropropane	mg/l	0.0260	0.0221	104.		63-130	16.4	20	WG602582
2-Butanone (MEK)	mg/l	0.107	0.104	85.0		58-144	2.56	20	WG602582
2-Chloroethyl vinyl ether	mg/l	0.101	0.0860	81.0		26-172	16.2	22	WG602582
2-Chlorotoluene	mg/l	0.0284	0.0253	114.		78-123	11.7	20	WG602582
4-Chlorotoluene	mg/l	0.0287	0.0254	115.		78-122	11.9	20	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.104	90.0		58-147	7.88	20	WG602582
Acetone	mg/l	0.114	0.109	91.0		49-153	4.16	21	WG602582
Acrolein	mg/l	0.118	0.112	94.0		10-181	5.26	30	WG602582
Acrylonitrile	mg/l	0.114	0.109	91.0		53-153	4.36	20	WG602582
Benzene	mg/l	0.0259	0.0241	104.		72-119	7.50	20	WG602582
Bromobenzene	mg/l	0.0273	0.0249	109.		76-121	9.12	20	WG602582
Bromodichloromethane	mg/l	0.0257	0.0231	103.		75-127	10.4	20	WG602582
Bromoform	mg/l	0.0262	0.0240	105.		61-136	8.85	20	WG602582
Bromomethane	mg/l	0.0287	0.0271	115.		42-172	5.98	20	WG602582
Carbon tetrachloride	mg/l	0.0243	0.0218	97.0		63-129	10.9	20	WG602582
Chlorobenzene	mg/l	0.0287	0.0258	115.		78-123	10.7	20	WG602582
Chlorodibromomethane	mg/l	0.0280	0.0256	112.		73-128	9.31	20	WG602582
Chloroethane	mg/l	0.0331	0.0285	132.		52-164	15.0	20	WG602582
Chloroform	mg/l	0.0260	0.0238	104.		76-122	8.98	20	WG602582
Chloromethane	mg/l	0.0255	0.0242	102.		50-141	5.31	20	WG602582
cis-1,2-Dichloroethene	mg/l	0.0256	0.0214	102.		75-121	17.6	20	WG602582
cis-1,3-Dichloropropene	mg/l	0.0253	0.0233	101.		74-124	8.23	20	WG602582
Di-isopropyl ether	mg/l	0.0266	0.0242	106.		66-129	9.36	20	WG602582
Dibromomethane	mg/l	0.0242	0.0232	97.0		77-124	3.85	20	WG602582
Dichlorodifluoromethane	mg/l	0.0243	0.0224	97.0		33-173	8.09	20	WG602582
Ethylbenzene	mg/l	0.0285	0.0261	114.		77-124	8.91	20	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0290	0.0254	116.		71-134	13.4	20	WG602582
Isopropylbenzene	mg/l	0.0288	0.0258	115.		74-126	11.2	20	WG602582
Methyl tert-butyl ether	mg/l	0.0221	0.0206	88.0		67-127	6.68	20	WG602582
Methylene Chloride	mg/l	0.0253	0.0236	101.		67-122	7.12	20	WG602582
n-Butylbenzene	mg/l	0.0275	0.0245	110.		74-130	11.4	20	WG602582
n-Propylbenzene	mg/l	0.0290	0.0257	116.		77-125	11.8	20	WG602582
Naphthalene	mg/l	0.0239	0.0223	96.0		70-134	7.23	20	WG602582
p-Isopropyltoluene	mg/l	0.0295	0.0263	118.		77-132	11.3	20	WG602582
sec-Butylbenzene	mg/l	0.0287	0.0260	115.		77-130	10.1	20	WG602582
Styrene	mg/l	0.0288	0.0266	115.		69-145	8.19	20	WG602582
tert-Butylbenzene	mg/l	0.0293	0.0263	117.		76-131	10.7	20	WG602582
Tetrachloroethene	mg/l	0.0294	0.0268	118.		69-131	9.32	20	WG602582
Toluene	mg/l	0.0250	0.0229	100.		75-114	9.16	20	WG602582

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July 29, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
trans-1,2-Dichloroethene	mg/l	0.0255	0.0235	102.	63-127	7.96	20	WG602582
trans-1,3-Dichloropropene	mg/l	0.0253	0.0228	101.	69-124	10.5	20	WG602582
Trichloroethene	mg/l	0.0272	0.0248	109.	69-131	9.25	20	WG602582
Trichlorofluoromethane	mg/l	0.0285	0.0258	114.	53-161	9.90	20	WG602582
Vinyl chloride	mg/l	0.0271	0.0247	108.	55-142	9.19	20	WG602582
Xylenes, Total	mg/l	0.0860	0.0775	115.	77-123	10.3	20	WG602582
4-Bromofluorobenzene				104.5	82-120			WG602582
Dibromofluoromethane				102.7	82-126			WG602582
Toluene-d8				105.6	92-112			WG602582
Ethane	mg/l	0.732	0.736	114.	70-130	0.490	25	WG603037
Ethene	mg/l	0.709	0.713	112.	70-130	0.480	25	WG603037
Methane	mg/l	0.379	0.380	112.	70-130	0.500	25	WG603037
pH	su	5.79	5.79	102*	98-101	0	20	WG602929
Chloride	mg/l	39.9	40.0	100.	90-110	0.250	20	WG602990
Sulfate	mg/l	39.3	38.8	98.0	90-110	1.28	20	WG602990
TOC (Total Organic Carbon)	mg/l	79.0	77.8	105.	85-115	1.49	20	WG602923
Specific Conductance	umhos/	505.	507.	102.	85-115	0.395	20	WG603320
1,2,4-Trichlorobenzene	mg/l	0.00531	0.00514	53.0	18-130	3.15	32	WG602743
2,4,6-Trichlorophenol	mg/l	0.00672	0.00694	67.0	12-147	3.26	40	WG602743
2,4-Dichlorophenol	mg/l	0.00689	0.00633	69.0	10-157	8.47	40	WG602743
2,4-Dimethylphenol	mg/l	0.00686	0.00636	69.0	19-160	7.68	40	WG602743
2,4-Dinitrophenol	mg/l	0.00849	0.00827	85.0	10-135	2.57	40	WG602743
2,4-Dinitrotoluene	mg/l	0.00616	0.00634	62.0	30-168	3.00	32	WG602743
2,6-Dinitrotoluene	mg/l	0.00631	0.00642	63.0	32-163	1.67	30	WG602743
2-Chloronaphthalene	mg/l	0.00686	0.00687	69.0	29-149	0.106	34	WG602743
2-Chlorophenol	mg/l	0.00630	0.00549	63.0	16-129	13.7	40	WG602743
2-Nitrophenol	mg/l	0.00663	0.00611	66.0	14-158	8.09	40	WG602743
3,3-Dichlorobenzidine	mg/l	0.00802	0.00789	80.0	42-150	1.62	29	WG602743
4,6-Dinitro-2-methylphenol	mg/l	0.00923	0.00943	92.0	10-164	2.21	40	WG602743
4-Bromophenyl-phenylether	mg/l	0.00776	0.00780	78.0	40-166	0.546	36	WG602743
4-Chloro-3-methylphenol	mg/l	0.00693	0.00624	69.0	14-158	10.5	40	WG602743
4-Chlorophenyl-phenylether	mg/l	0.00743	0.00749	74.0	39-155	0.775	33	WG602743
4-Nitrophenol	mg/l	0.00201	0.00152	20.0	10-61	27.5	40	WG602743
Acenaphthene	mg/l	0.00747	0.00743	75.0	37-159	0.545	30	WG602743
Acenaphthylene	mg/l	0.00671	0.00670	67.0	34-162	0.0423	31	WG602743
Anthracene	mg/l	0.00789	0.00780	79.0	48-167	1.15	26	WG602743
Benzidine	mg/l	0.00421	0.00417	42.0	10-86	0.944	40	WG602743
Benzo(a)anthracene	mg/l	0.00809	0.00814	81.0	46-167	0.553	29	WG602743
Benzo(a)pyrene	mg/l	0.00785	0.00746	78.0	39-167	5.11	29	WG602743
Benzo(b)fluoranthene	mg/l	0.00824	0.00827	82.0	39-173	0.356	32	WG602743
Benzo(g,h,i)perylene	mg/l	0.00853	0.00864	85.0	42-181	1.28	30	WG602743
Benzo(k)fluoranthene	mg/l	0.00830	0.00799	83.0	42-178	3.75	33	WG602743
Benzylbutyl phthalate	mg/l	0.00727	0.00735	73.0	10-178	1.15	40	WG602743
Bis(2-chlorethoxy)methane	mg/l	0.00756	0.00723	76.0	34-155	4.40	31	WG602743
Bis(2-chloroethyl)ether	mg/l	0.00728	0.00644	73.0	22-149	12.2	38	WG602743
Bis(2-chloroisopropyl)ether	mg/l	0.00733	0.00642	73.0	26-149	13.2	34	WG602743
Bis(2-ethylhexyl)phthalate	mg/l	0.00745	0.00775	74.0	42-191	3.99	33	WG602743

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chrysene	mg/l	0.00878	0.00883	88.0	46-170	0.551	30	WG602743
Di-n-butyl phthalate	mg/l	0.00755	0.00731	76.0	33-175	3.27	39	WG602743
Di-n-octyl phthalate	mg/l	0.00713	0.00733	71.0	40-170	2.78	28	WG602743
Dibenz(a,h)anthracene	mg/l	0.00839	0.00823	84.0	43-187	1.92	31	WG602743
Diethyl phthalate	mg/l	0.00823	0.00848	82.0	10-182	2.97	35	WG602743
Dimethyl phthalate	mg/l	0.00813	0.00809	81.0	10-165	0.473	37	WG602743
Fluoranthene	mg/l	0.00779	0.00788	78.0	46-171	1.15	37	WG602743
Fluorene	mg/l	0.00772	0.00753	77.0	39-163	2.49	36	WG602743
Hexachloro-1,3-butadiene	mg/l	0.00491	0.00459	49.0	18-136	6.73	30	WG602743
Hexachlorobenzene	mg/l	0.00764	0.00784	76.0	38-163	2.63	35	WG602743
Hexachlorocyclopentadiene	mg/l	0.00788	0.00781	79.0	10-142	0.889	40	WG602743
Hexachloroethane	mg/l	0.00442	0.00409	44.0	10-130	7.81	39	WG602743
Indeno(1,2,3-cd)pyrene	mg/l	0.00828	0.00833	83.0	42-184	0.579	32	WG602743
Isophorone	mg/l	0.00741	0.00675	74.0	36-166	9.43	35	WG602743
n-Nitrosodi-n-propylamine	mg/l	0.00745	0.00642	74.0	27-157	14.9	31	WG602743
n-Nitrosodimethylamine	mg/l	0.00446	0.00428	45.0	10-96	4.14	36	WG602743
n-Nitrosodiphenylamine	mg/l	0.00821	0.00799	82.0	41-168	2.73	37	WG602743
Naphthalene	mg/l	0.00674	0.00635	67.0	26-147	5.88	31	WG602743
Nitrobenzene	mg/l	0.00678	0.00645	68.0	22-154	4.95	37	WG602743
Pentachlorophenol	mg/l	0.00565	0.00553	56.0	10-128	2.11	40	WG602743
Phenanthrene	mg/l	0.00831	0.00815	83.0	46-163	1.90	29	WG602743
Phenol	mg/l	0.00383	0.00300	38.0	10-69	24.4	40	WG602743
Pyrene	mg/l	0.00824	0.00812	82.0	45-176	1.44	28	WG602743
2,4,6-Tribromophenol				75.27	16-147			WG602743
2-Fluorobiphenyl				74.39	29-127			WG602743
2-Fluorophenol				45.26	10-75			WG602743
Nitrobenzene-d5				71.59	17-119			WG602743
Phenol-d5				33.38	10-63			WG602743
p-Terphenyl-d14				78.64	40-174			WG602743
Dissolved Solids	mg/l	8900	8830	101.	85-115	0.767	20	WG603124

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/l	6.70	0	5.5	122.*	55-109	L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)					98.88	62-128		WG602751
Bromide	mg/l	49.1	0	50	98.2	80-120	L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0252	0	.025	101.	71-130	L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0250	0	.025	99.9	58-137	L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0230	0	.025	92.1	64-149	L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0242	0	.025	96.8	73-128	L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0251	0	.025	100.	36-159	L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0230	0	.025	92.2	58-133	L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0243	0	.025	97.2	32-152	L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0246	0	.025	98.5	50-140	L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0241	0	.025	96.3	68-135	L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.4	74-137	L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0246	0	.025	98.4	67-133	L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0261	0	.025	104.	67-133	L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0258	0	.025	103.	62-141	L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0195	0	.025	77.9	55-148	L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0250	0	.025	99.8	71-129	L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0248	0	.025	99.1	75-125	L584961-16	WG602582

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Tax I.D. 62-0814289

Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2-Dichloroethane	mg/l	0.0229	0	.025	91.7	59-135	L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0242	0	.025	96.8	68-126	L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	104.	67-136	L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0266	0	.025	106.	69-131	L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0243	0	.025	97.3	70-122	L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0246	0	.025	98.5	70-123	L584961-16	WG602582
2,2-Dichloropropane	mg/l	0.0245	0	.025	97.9	51-141	L584961-16	WG602582
2-Butanone (MEK)	mg/l	0.111	0	.125	89.1	51-149	L584961-16	WG602582
2-Chloroethyl vinyl ether	mg/l	0.0966	0	.125	77.3	10-161	L584961-16	WG602582
2-Chlorotoluene	mg/l	0.0255	0	.025	102.	65-133	L584961-16	WG602582
4-Chlorotoluene	mg/l	0.0258	0	.025	103.	67-129	L584961-16	WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.105	0	.125	83.9	53-154	L584961-16	WG602582
Acetone	mg/l	0.124	0	.125	99.5	34-146	L584961-16	WG602582
Acrolein	mg/l	0.116	0	.125	92.6	10-189	L584961-16	WG602582
Acrylonitrile	mg/l	0.112	0	.125	89.5	49-162	L584961-16	WG602582
Benzene	mg/l	0.0247	0	.025	99.0	51-134	L584961-16	WG602582
Bromobenzene	mg/l	0.0251	0	.025	100.	64-130	L584961-16	WG602582
Bromodichloromethane	mg/l	0.0235	0	.025	94.0	67-132	L584961-16	WG602582
Bromoform	mg/l	0.0249	0	.025	99.6	59-137	L584961-16	WG602582
Bromomethane	mg/l	0.0290	0	.025	116.	23-177	L584961-16	WG602582
Carbon tetrachloride	mg/l	0.0228	0	.025	91.2	49-140	L584961-16	WG602582
Chlorobenzene	mg/l	0.0263	0	.025	105.	69-126	L584961-16	WG602582
Chlorodibromomethane	mg/l	0.0252	0	.025	101.	68-130	L584961-16	WG602582
Chloroethane	mg/l	0.0302	0	.025	121.	32-177	L584961-16	WG602582
Chloroform	mg/l	0.0243	0	.025	97.0	64-130	L584961-16	WG602582
Chloromethane	mg/l	0.0253	0	.025	101.	27-155	L584961-16	WG602582
cis-1,2-Dichloroethene	mg/l	0.0244	0	.025	97.6	54-137	L584961-16	WG602582
cis-1,3-Dichloropropene	mg/l	0.0237	0	.025	94.9	63-127	L584961-16	WG602582
Di-isopropyl ether	mg/l	0.0250	0	.025	99.9	58-133	L584961-16	WG602582
Dibromomethane	mg/l	0.0234	0	.025	93.4	68-131	L584961-16	WG602582
Dichlorodifluoromethane	mg/l	0.0239	0	.025	95.4	16-188	L584961-16	WG602582
Ethylbenzene	mg/l	0.0260	0	.025	104.	64-135	L584961-16	WG602582
Hexachloro-1,3-butadiene	mg/l	0.0254	0	.025	101.	64-140	L584961-16	WG602582
Isopropylbenzene	mg/l	0.0263	0	.025	105.	62-134	L584961-16	WG602582
Methyl tert-butyl ether	mg/l	0.0217	0	.025	86.7	55-136	L584961-16	WG602582
Methylene Chloride	mg/l	0.0246	0	.025	98.4	52-130	L584961-16	WG602582
n-Butylbenzene	mg/l	0.0249	0	.025	99.6	62-142	L584961-16	WG602582
n-Propylbenzene	mg/l	0.0263	0	.025	105.	62-137	L584961-16	WG602582
Naphthalene	mg/l	0.0220	0	.025	88.1	65-140	L584961-16	WG602582
p-Isopropyltoluene	mg/l	0.0267	0	.025	107.	64-142	L584961-16	WG602582
sec-Butylbenzene	mg/l	0.0260	0	.025	104.	67-139	L584961-16	WG602582
Styrene	mg/l	0.0265	0	.025	106.	58-152	L584961-16	WG602582
tert-Butylbenzene	mg/l	0.0261	0	.025	104.	66-139	L584961-16	WG602582
Tetrachloroethene	mg/l	0.0272	0	.025	109.	56-139	L584961-16	WG602582
Toluene	mg/l	0.0235	0	.025	94.1	61-126	L584961-16	WG602582
trans-1,2-Dichloroethene	mg/l	0.0247	0	.025	98.9	45-137	L584961-16	WG602582
trans-1,3-Dichloropropene	mg/l	0.0230	0	.025	92.0	59-130	L584961-16	WG602582
Trichloroethene	mg/l	0.0254	0	.025	101.	40-155	L584961-16	WG602582
Trichlorofluoromethane	mg/l	0.0269	0	.025	108.	35-177	L584961-16	WG602582
Vinyl chloride	mg/l	0.0262	0	.025	105.	32-159	L584961-16	WG602582
Xylenes, Total	mg/l	0.0782	0	.075	104.	64-133	L584961-16	WG602582
4-Bromofluorobenzene					104.4	82-120		WG602582
Dibromofluoromethane					107.6	82-126		WG602582
Toluene-d8					104.8	92-112		WG602582
Mercury, Dissolved	mg/l	0.00284	0	.003	94.7	70-130	L585012-01	WG602812

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Est. 1970

July 29, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TOC (Total Organic Carbon)	mg/l	50.7	1.20	50	99.0	80-120	L584810-02	WG602923
Barium,Dissolved	mg/l	1.09	0.0691	1	102.	75-125	L584609-12	WG603226
Boron,Dissolved	mg/l	1.02	0	1	102.	75-125	L584609-12	WG603226
Calcium,Dissolved	mg/l	46.9	37.0	10	99.0	75-125	L584609-12	WG603226
Chromium,Dissolved	mg/l	1.05	0.00240	1	105.	75-125	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.06	0.000400	1	106.	75-125	L584609-12	WG603226
Copper,Dissolved	mg/l	0.999	0.000100	1	99.9	75-125	L584609-12	WG603226
Iron,Dissolved	mg/l	1.08	0	1	108.	75-125	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.554	0	.5	111.	75-125	L584609-12	WG603226
Magnesium,Dissolved	mg/l	21.0	11.0	10	100.	75-125	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.03	0	1	103.	75-125	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.928	0	1	92.8	75-125	L584609-12	WG603226
Potassium,Dissolved	mg/l	12.0	1.90	10	101.	75-125	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.6	6.10	10	105.	75-125	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.16	0.147	1	101.	75-125	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.01	0.00720	1	100.	75-125	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	0.00340	1	103.	75-125	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.57	2.50	1	107.	75-125	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0468	0	.05	93.6	75-125	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0458	0	.05	91.6	75-125	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0453	0.000550	.05	89.5	75-125	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0431	0	.05	86.2	75-125	L585179-01	WG604526

Analyte	Units	MSD	Matrix Spike Duplicate		%Rec	Limit	RPD	Limit	Ref Samp	Batch
			Ref							
TPH (GC/FID) Low Fraction	mg/l	6.99	6.70	127.*	55-109	4.17	20		L585012-01	WG602751
a,a,a-Trifluorotoluene(FID)				98.95	62-128					WG602751
Bromide	mg/l	48.2	49.1	96.4	80-120	1.85	20		L584609-09	WG602614
1,1,1,2-Tetrachloroethane	mg/l	0.0236	0.0252	94.5	71-130	6.42	20		L584961-16	WG602582
1,1,1-Trichloroethane	mg/l	0.0232	0.0250	92.6	58-137	7.57	20		L584961-16	WG602582
1,1,2,2-Tetrachloroethane	mg/l	0.0217	0.0230	87.0	64-149	5.69	20		L584961-16	WG602582
1,1,2-Trichloroethane	mg/l	0.0228	0.0242	91.3	73-128	5.89	20		L584961-16	WG602582
1,1,2-Trichlorotrifluoroethane	mg/l	0.0242	0.0251	96.6	36-159	3.95	21		L584961-16	WG602582
1,1-Dichloroethane	mg/l	0.0217	0.0230	87.0	58-133	5.84	20		L584961-16	WG602582
1,1-Dichloroethene	mg/l	0.0231	0.0243	92.4	32-152	5.07	20		L584961-16	WG602582
1,1-Dichloropropene	mg/l	0.0235	0.0246	94.0	50-140	4.71	20		L584961-16	WG602582
1,2,3-Trichlorobenzene	mg/l	0.0230	0.0241	91.9	68-135	4.68	20		L584961-16	WG602582
1,2,3-Trichloropropane	mg/l	0.0221	0.0238	88.3	74-137	7.73	20		L584961-16	WG602582
1,2,3-Trimethylbenzene	mg/l	0.0230	0.0246	92.0	67-133	6.80	20		L584961-16	WG602582
1,2,4-Trichlorobenzene	mg/l	0.0241	0.0261	96.4	67-133	7.88	20		L584961-16	WG602582
1,2,4-Trimethylbenzene	mg/l	0.0237	0.0258	94.8	62-141	8.48	20		L584961-16	WG602582
1,2-Dibromo-3-Chloropropane	mg/l	0.0189	0.0195	75.6	55-148	3.00	22		L584961-16	WG602582
1,2-Dibromoethane	mg/l	0.0233	0.0250	93.2	71-129	6.90	20		L584961-16	WG602582
1,2-Dichlorobenzene	mg/l	0.0232	0.0248	92.8	75-125	6.55	20		L584961-16	WG602582
1,2-Dichloroethane	mg/l	0.0220	0.0229	87.9	59-135	4.24	20		L584961-16	WG602582
1,2-Dichloropropane	mg/l	0.0231	0.0242	92.6	68-126	4.45	20		L584961-16	WG602582
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0259	94.9	67-136	8.73	20		L584961-16	WG602582
1,3-Dichlorobenzene	mg/l	0.0243	0.0266	97.4	69-131	8.92	20		L584961-16	WG602582
1,3-Dichloropropane	mg/l	0.0224	0.0243	89.6	70-122	8.29	20		L584961-16	WG602582
1,4-Dichlorobenzene	mg/l	0.0229	0.0246	91.6	70-123	7.25	20		L584961-16	WG602582

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
2,2-Dichloropropane	mg/l	0.0216	0.0245	86.3	51-141	12.6	20	L584961-16		WG602582
2-Butanone (MEK)	mg/l	0.105	0.111	84.3	51-149	5.56	22	L584961-16		WG602582
2-Chloroethyl vinyl ether	mg/l	0.0865	0.0966	69.2	10-161	11.1	40	L584961-16		WG602582
2-Chlorotoluene	mg/l	0.0234	0.0255	93.5	65-133	8.70	20	L584961-16		WG602582
4-Chlorotoluene	mg/l	0.0238	0.0258	95.2	67-129	7.86	20	L584961-16		WG602582
4-Methyl-2-pentanone (MIBK)	mg/l	0.102	0.105	81.3	53-154	3.09	21	L584961-16		WG602582
Acetone	mg/l	0.120	0.124	96.1	34-146	3.49	22	L584961-16		WG602582
Acrolein	mg/l	0.113	0.116	90.1	10-189	2.68	30	L584961-16		WG602582
Acrylonitrile	mg/l	0.109	0.112	87.2	49-162	2.59	20	L584961-16		WG602582
Benzene	mg/l	0.0234	0.0247	93.7	51-134	5.49	20	L584961-16		WG602582
Bromobenzene	mg/l	0.0233	0.0251	93.0	64-130	7.61	20	L584961-16		WG602582
Bromodichloromethane	mg/l	0.0221	0.0235	88.3	67-132	6.26	20	L584961-16		WG602582
Bromoform	mg/l	0.0234	0.0249	93.7	59-137	6.05	20	L584961-16		WG602582
Bromomethane	mg/l	0.0258	0.0290	103.	23-177	11.6	21	L584961-16		WG602582
Carbon tetrachloride	mg/l	0.0217	0.0228	86.8	49-140	4.96	20	L584961-16		WG602582
Chlorobenzene	mg/l	0.0243	0.0263	97.2	69-126	7.81	20	L584961-16		WG602582
Chlorodibromomethane	mg/l	0.0239	0.0252	95.6	68-130	5.15	20	L584961-16		WG602582
Chloroethane	mg/l	0.0276	0.0302	110.	32-177	8.92	21	L584961-16		WG602582
Chloroform	mg/l	0.0230	0.0243	92.0	64-130	5.29	20	L584961-16		WG602582
Chloromethane	mg/l	0.0237	0.0253	94.8	27-155	6.43	20	L584961-16		WG602582
cis-1,2-Dichloroethene	mg/l	0.0210	0.0244	84.1	54-137	14.9	20	L584961-16		WG602582
cis-1,3-Dichloropropene	mg/l	0.0226	0.0237	90.2	63-127	5.09	20	L584961-16		WG602582
Di-isopropyl ether	mg/l	0.0238	0.0250	95.2	58-133	4.79	20	L584961-16		WG602582
Dibromomethane	mg/l	0.0219	0.0234	87.5	68-131	6.56	20	L584961-16		WG602582
Dichlorodifluoromethane	mg/l	0.0226	0.0239	90.2	16-188	5.55	22	L584961-16		WG602582
Ethylbenzene	mg/l	0.0243	0.0260	97.2	64-135	6.64	20	L584961-16		WG602582
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0254	96.7	64-140	4.79	20	L584961-16		WG602582
Isopropylbenzene	mg/l	0.0241	0.0263	96.6	62-134	8.53	20	L584961-16		WG602582
Methyl tert-butyl ether	mg/l	0.0202	0.0217	81.0	55-136	6.82	20	L584961-16		WG602582
Methylene Chloride	mg/l	0.0229	0.0246	91.8	52-130	6.99	20	L584961-16		WG602582
n-Butylbenzene	mg/l	0.0231	0.0249	92.4	62-142	7.53	20	L584961-16		WG602582
n-Propylbenzene	mg/l	0.0241	0.0263	96.6	62-137	8.50	20	L584961-16		WG602582
Naphthalene	mg/l	0.0211	0.0220	84.4	65-140	4.35	20	L584961-16		WG602582
p-Isopropyltoluene	mg/l	0.0248	0.0267	99.1	64-142	7.59	20	L584961-16		WG602582
sec-Butylbenzene	mg/l	0.0241	0.0260	96.4	67-139	7.41	20	L584961-16		WG602582
Styrene	mg/l	0.0246	0.0265	98.2	58-152	7.57	20	L584961-16		WG602582
tert-Butylbenzene	mg/l	0.0246	0.0261	98.4	66-139	6.08	20	L584961-16		WG602582
Tetrachloroethene	mg/l	0.0247	0.0272	98.8	56-139	9.49	20	L584961-16		WG602582
Toluene	mg/l	0.0223	0.0235	89.1	61-126	5.46	20	L584961-16		WG602582
trans-1,2-Dichloroethene	mg/l	0.0233	0.0247	93.0	45-137	6.15	20	L584961-16		WG602582
trans-1,3-Dichloropropene	mg/l	0.0220	0.0230	87.9	59-130	4.56	20	L584961-16		WG602582
Trichloroethene	mg/l	0.0235	0.0254	94.0	40-155	7.58	20	L584961-16		WG602582
Trichlorofluoromethane	mg/l	0.0251	0.0269	100.	35-177	7.14	23	L584961-16		WG602582
Vinyl chloride	mg/l	0.0246	0.0262	98.5	32-159	6.26	21	L584961-16		WG602582
Xylenes, Total	mg/l	0.0726	0.0782	96.8	64-133	7.41	20	L584961-16		WG602582
4-Bromofluorobenzene				104.2	82-120					WG602582
Dibromofluoromethane				104.6	82-126					WG602582
Toluene-d8				105.1	92-112					WG602582
Mercury,Dissolved	mg/l	0.00276	0.00284	92.0	70-130	2.86	30	L585012-01		WG602812
TOC (Total Organic Carbon)	mg/l	47.4	50.7	92.5	80-120	6.64	20	L584810-02		WG602923
Barium,Dissolved	mg/l	1.08	1.09	101.	75-125	0.922	20	L584609-12		WG603226
Boron,Dissolved	mg/l	1.02	1.02	102.	75-125	0	20	L584609-12		WG603226
Calcium,Dissolved	mg/l	46.8	46.9	98.0	75-125	0.213	20	L584609-12		WG603226

\* 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  
Aaron Stacy (Olsson)  
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report  
Level II

L585015

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

July 29, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chromium,Dissolved	mg/l	1.02	1.05	102.	75-125	2.90	20	L584609-12	WG603226
Cobalt,Dissolved	mg/l	1.03	1.06	103.	75-125	2.87	20	L584609-12	WG603226
Copper,Dissolved	mg/l	0.995	0.999	99.5	75-125	0.401	20	L584609-12	WG603226
Iron,Dissolved	mg/l	1.05	1.08	105.	75-125	2.82	20	L584609-12	WG603226
Lithium,Dissolved	mg/l	0.528	0.554	106.	75-125	4.81	20	L584609-12	WG603226
Magnesium,Dissolved	mg/l	20.9	21.0	99.0	75-125	0.477	20	L584609-12	WG603226
Manganese,Dissolved	mg/l	1.02	1.03	102.	75-125	0.976	20	L584609-12	WG603226
Nickel,Dissolved	mg/l	0.904	0.928	90.4	75-125	2.62	20	L584609-12	WG603226
Potassium,Dissolved	mg/l	11.6	12.0	97.0	75-125	3.39	20	L584609-12	WG603226
Sodium,Dissolved	mg/l	16.0	16.6	99.0	75-125	3.68	20	L584609-12	WG603226
Strontium,Dissolved	mg/l	1.12	1.16	97.3	75-125	3.51	20	L584609-12	WG603226
Vanadium,Dissolved	mg/l	1.00	1.01	99.3	75-125	0.995	20	L584609-12	WG603226
Zinc,Dissolved	mg/l	1.03	1.03	103.	75-125	0	20	L584609-12	WG603226
Silicon,Dissolved	mg/l	3.53	3.57	103.	75-125	1.13	20	L584609-12	WG603226
Antimony,Dissolved	mg/l	0.0383	0.0468	76.6	75-125	20.0	20	L585179-01	WG604526
Arsenic,Dissolved	mg/l	0.0374	0.0458	74.8*	75-125	20.2*	20	L585179-01	WG604526
Molybdenum,Dissolved	mg/l	0.0379	0.0453	74.7*	75-125	17.8	20	L585179-01	WG604526
Selenium,Dissolved	mg/l	0.0358	0.0431	71.6*	75-125	18.5	20	L585179-01	WG604526

Batch number /Run number / Sample number cross reference

WG602751: R2255773: L585015-01  
WG602670: R2256613: L585015-01  
WG602614: R2257834: L585015-01  
WG602809: R2257935: L585015-01  
WG602912: R2257953: L585015-01  
WG602917: R2257954: L585015-01  
WG602582: R2258253: L585015-01  
WG603037: R2258613: L585015-01  
WG602929: R2259213: L585015-01  
WG602812: R2260755: L585015-01  
WG602990: R2260993: L585015-01  
WG602923: R2261115: L585015-01  
WG603320: R2261675: L585015-01  
WG602743: R2262494: L585015-01  
WG603124: R2264154: L585015-01  
WG603226: R2264474: L585015-01  
WG604526: R2276876: L585015-01

\* \* 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.'





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L585015

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July 29, 2012

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.



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Est. 1970

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

## Report Summary

Sunday September 16, 2012

Report Number: L593599

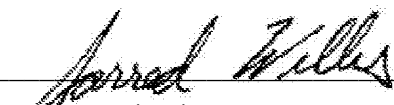
Samples Received: 09/06/12

Client Project: F12 POLY RELEASE

Description: F12 POLY RELEASE

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:

  
Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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.

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REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	BDL	1.0	mg/l	9056	09/07/12	1
Chloride	100	50.	mg/l	9056	09/07/12	50
Fluoride	1.7	0.10	mg/l	9056	09/10/12	1
Sulfate	1400	250	mg/l	9056	09/07/12	50
Alkalinity	180	20.	mg/l	2320B	09/11/12	1
Alkalinity,Bicarbonate	180	20.	mg/l	2320B	09/11/12	1
Alkalinity,Carbonate	BDL	20.	mg/l	2320B	09/11/12	1
Methane	BDL	0.010	mg/l	RSK175	09/07/12	1
Ethane	BDL	0.013	mg/l	RSK175	09/07/12	1
Ethene	BDL	0.013	mg/l	RSK175	09/07/12	1
pH	8.2		su	9040C	09/11/12	1
Specific Conductance	3600		umhos/cm	9050A	09/08/12	1
TOC (Total Organic Carbon)	4.1	1.0	mg/l	9060A	09/11/12	1
Dissolved Solids	2400	10.	mg/l	2540C	09/11/12	1
Antimony,Dissolved	BDL	0.0010	mg/l	200.8	09/14/12	1
Arsenic,Dissolved	0.0057	0.0010	mg/l	200.8	09/11/12	1
Molybdenum,Dissolved	0.024	0.0020	mg/l	200.8	09/11/12	1
Selenium,Dissolved	0.026	0.0010	mg/l	200.8	09/14/12	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	09/11/12	1
Potassium,Dissolved	1.9	0.50	mg/l	6010B	09/11/12	1
Barium,Dissolved	0.015	0.0050	mg/l	200.7	09/13/12	1
Boron,Dissolved	BDL	0.20	mg/l	200.7	09/13/12	1
Calcium,Dissolved	42.	0.50	mg/l	200.7	09/13/12	1
Chromium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Cobalt,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Copper,Dissolved	0.031	0.020	mg/l	200.7	09/13/12	1
Iron,Dissolved	BDL	0.10	mg/l	200.7	09/13/12	1
Lithium,Dissolved	0.050	0.015	mg/l	200.7	09/13/12	1
Magnesium,Dissolved	2.8	0.10	mg/l	200.7	09/13/12	1
Manganese,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Nickel,Dissolved	BDL	0.020	mg/l	200.7	09/13/12	1
Potassium,Dissolved	1.9	0.50	mg/l	200.7	09/13/12	1
Silicon,Dissolved	2.9	0.20	mg/l	200.7	09/13/12	1
Sodium,Dissolved	760	0.50	mg/l	200.7	09/13/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Strontium,Dissolved	1.7	0.010	mg/l	200.7	09/13/12	1
Vanadium,Dissolved	BDL	0.010	mg/l	200.7	09/13/12	1
Zinc,Dissolved	BDL	0.030	mg/l	200.7	09/13/12	1
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l	8015D/GRO	09/09/12	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.7		% Rec.	8015D/GRO	09/09/12	1
<b>Volatile Organics</b>						
Acetone	BDL	0.050	mg/l	8260B	09/06/12	1
Acrolein	BDL	0.050	mg/l	8260B	09/06/12	1
Acrylonitrile	BDL	0.010	mg/l	8260B	09/06/12	1
Benzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromoform	BDL	0.0010	mg/l	8260B	09/06/12	1
Bromomethane	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Chloroethane	BDL	0.0050	mg/l	8260B	09/06/12	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	09/06/12	1
Chloroform	BDL	0.0050	mg/l	8260B	09/06/12	1
Chloromethane	BDL	0.0025	mg/l	8260B	09/06/12	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Dibromomethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	09/06/12	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	09/06/12	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Hexachloro-1,3-butadiene	BDL	0.0010	mg/l	8260B	09/06/12	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	09/06/12	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	09/06/12	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	09/06/12	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	09/06/12	1
Naphthalene	BDL	0.0050	mg/l	8260B	09/06/12	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Styrene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Toluene	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichloroethene	BDL	0.0010	mg/l	8260B	09/06/12	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	09/06/12	1
1,2,3-Trichloropropane	BDL	0.0025	mg/l	8260B	09/06/12	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	09/06/12	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	09/06/12	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	09/06/12	1
Surrogate Recovery						
Toluene-d8	99.2		% Rec.	8260B	09/06/12	1
Dibromofluoromethane	90.7		% Rec.	8260B	09/06/12	1
4-Bromofluorobenzene	104.		% Rec.	8260B	09/06/12	1
TPH (GC/FID) High Fraction	BDL	0.10	mg/l	3511/8015	09/12/12	1
Surrogate recovery(%)						
o-Terphenyl	110.		% Rec.	3511/8015	09/12/12	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Acenaphthylene	BDL	0.0010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c

REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
Benzo(a)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(b)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(k)fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(g,h,i)perylene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzo(a)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chloronaphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	8270 C	09/10/12	1
Chrysene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Dibenz(a,h)anthracene	BDL	0.0010	mg/l	8270 C	09/10/12	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	8270 C	09/10/12	1
Fluoranthene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Fluorene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachlorobenzene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	8270 C	09/10/12	1
Hexachloroethane	BDL	0.010	mg/l	8270 C	09/10/12	1
Indeno(1,2,3-cd)pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Isophorone	BDL	0.010	mg/l	8270 C	09/10/12	1
Naphthalene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Nitrobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodimethylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenanthrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
Benzylbutyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Bis(2-ethylhexyl)phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-butyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Diethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Dimethyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Di-n-octyl phthalate	BDL	0.0030	mg/l	8270 C	09/10/12	1
Pyrene	BDL	0.0010	mg/l	8270 C	09/10/12	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	8270 C	09/10/12	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Chlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L593599-01 (PH) - 8.2@15.6c



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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Aaron Stacy  
Encana  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

September 16, 2012

Date Received : September 06, 2012  
Description : F12 Poly Release

Sample ID : SCHU1WW-090512

Collected By : Aaron Stacy  
Collection Date : 09/05/12 10:00

ESC Sample # : L593599-01

Site ID : SCHU1WW

Project # : F12 POLY RELEASE

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,4-Dimethylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4-Dinitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
4-Nitrophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Pentachlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Phenol	BDL	0.010	mg/l	8270 C	09/10/12	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	8270 C	09/10/12	1
Surrogate Recovery						
2-Fluorophenol	51.6		% Rec.	8270 C	09/10/12	1
Phenol-d5	34.5		% Rec.	8270 C	09/10/12	1
Nitrobenzene-d5	61.9		% Rec.	8270 C	09/10/12	1
2-Fluorobiphenyl	61.5		% Rec.	8270 C	09/10/12	1
2,4,6-Tribromophenol	72.3		% Rec.	8270 C	09/10/12	1
p-Terphenyl-d14	81.7		% Rec.	8270 C	09/10/12	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: 09/16/12 13:39 Printed: 09/16/12 13:40  
L593599-01 (PH) - 8.2@15.6c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L593599-01	WG611870	SAMP	pH	R2339874	T8
	WG611581	SAMP	Benzidine	R2340113	J3



Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
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  
09/16/12 at 13:40:08

TSR Signing Reports: 358  
R5 - Desired TAT

Be sure sub lab uses CLIENT SAMPLE ID & not ESC sample ID. Try not to report benzene BDL above 250x dilution. Water samples ONLY under this account. Soils under ENCANACO. Log PAHs as PAHSIM.

Sample: L593599-01 Account: ENCRCO Received: 09/06/12 09:00 Due Date: 09/13/12 00:00 RPT Date: 09/16/12 13:39



Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593599

12065 Lebanon Rd.  
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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,1-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1,2-Trichlorotrifluoroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
1,1-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,2,3-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2,4-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG611310	09/06/12 17:50
1,2-Dibromoethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloroethane	< .001	mg/l			WG611310	09/06/12 17:50
1,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,3,5-Trimethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
1,3-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
1,4-Dichlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
2,2-Dichloropropane	< .001	mg/l			WG611310	09/06/12 17:50
2-Butanone (MEK)	< .01	mg/l			WG611310	09/06/12 17:50
2-Chloroethyl vinyl ether	< .05	mg/l			WG611310	09/06/12 17:50
2-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Chlorotoluene	< .001	mg/l			WG611310	09/06/12 17:50
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG611310	09/06/12 17:50
Acetone	< .05	mg/l			WG611310	09/06/12 17:50
Acrolein	< .025	mg/l			WG611310	09/06/12 17:50
Acrylonitrile	< .01	mg/l			WG611310	09/06/12 17:50
Benzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Bromodichloromethane	< .001	mg/l			WG611310	09/06/12 17:50
Bromoform	< .001	mg/l			WG611310	09/06/12 17:50
Bromomethane	< .005	mg/l			WG611310	09/06/12 17:50
Carbon tetrachloride	< .001	mg/l			WG611310	09/06/12 17:50
Chlorobenzene	< .001	mg/l			WG611310	09/06/12 17:50
Chlorodibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Chloroethane	< .005	mg/l			WG611310	09/06/12 17:50
Chloroform	< .005	mg/l			WG611310	09/06/12 17:50
Chloromethane	< .0025	mg/l			WG611310	09/06/12 17:50
cis-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
cis-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Di-isopropyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Dibromomethane	< .001	mg/l			WG611310	09/06/12 17:50
Dichlorodifluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Ethylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Hexachloro-1,3-butadiene	< .001	mg/l			WG611310	09/06/12 17:50
Isopropylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Methyl tert-butyl ether	< .001	mg/l			WG611310	09/06/12 17:50
Methylene Chloride	< .005	mg/l			WG611310	09/06/12 17:50
n-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
n-Propylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Naphthalene	< .005	mg/l			WG611310	09/06/12 17:50
p-Isopropyltoluene	< .001	mg/l			WG611310	09/06/12 17:50
sec-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50
Styrene	< .001	mg/l			WG611310	09/06/12 17:50
tert-Butylbenzene	< .001	mg/l			WG611310	09/06/12 17:50

\* Performance of this Analyte is outside of established criteria.

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



Encana  
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2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Tetrachloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Toluene	< .005	mg/l			WG611310	09/06/12 17:50
trans-1,2-Dichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
trans-1,3-Dichloropropene	< .001	mg/l			WG611310	09/06/12 17:50
Trichloroethene	< .001	mg/l			WG611310	09/06/12 17:50
Trichlorofluoromethane	< .005	mg/l			WG611310	09/06/12 17:50
Vinyl chloride	< .001	mg/l			WG611310	09/06/12 17:50
Xylenes, Total	< .003	mg/l			WG611310	09/06/12 17:50
4-Bromofluorobenzene		% Rec.	111.8	82-120	WG611310	09/06/12 17:50
Dibromofluoromethane		% Rec.	92.43	82-126	WG611310	09/06/12 17:50
Toluene-d8		% Rec.	101.2	92-112	WG611310	09/06/12 17:50
Ethane	< .013	mg/l			WG611471	09/07/12 15:25
Ethene	< .013	mg/l			WG611471	09/07/12 15:25
Methane	< .01	mg/l			WG611471	09/07/12 15:25
Bromide	< 1	mg/l			WG611421	09/07/12 07:15
Chloride	< 1	mg/l			WG611421	09/07/12 07:15
Sulfate	< 5	mg/l			WG611421	09/07/12 07:15
Specific Conductance	0.990	umhos/cm			WG611526	09/08/12 12:01
TPH (GC/FID) Low Fraction	< .1	mg/l			WG611405	09/08/12 22:20
a,a,a-Trifluorotoluene(FID)		% Rec.	98.57	62-128	WG611405	09/08/12 22:20
Arsenic,Dissolved	< .001	mg/l			WG611718	09/10/12 23:25
Molybdenum,Dissolved	< .002	mg/l			WG611718	09/10/12 23:25
TPH (GC/FID) High Fraction	< .1	ppm			WG611577	09/11/12 09:03
o-Terphenyl		% Rec.	97.27	50-150	WG611577	09/11/12 09:03
Potassium,Dissolved	< .5	mg/l			WG611671	09/11/12 11:35
Fluoride	< .1	mg/l			WG611624	09/10/12 14:35
Dissolved Solids	< 10	mg/l			WG611507	09/11/12 17:03
Alkalinity	< 20	mg/l			WG611833	09/11/12 11:48
1,2,4-Trichlorobenzene	< .01	mg/l			WG611581	09/10/12 02:50
2,4,6-Trichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dichlorophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dimethylphenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
2,4-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2,6-Dinitrotoluene	< .01	mg/l			WG611581	09/10/12 02:50
2-Chloronaphthalene	< .001	mg/l			WG611581	09/10/12 02:50
2-Chlorophenol	< .01	mg/l			WG611581	09/10/12 02:50

\* Performance of this Analyte is outside of established criteria.

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



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Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
3,3-Dichlorobenzidine	< .01	mg/l			WG611581	09/10/12 02:50
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Bromophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Chloro-3-methylphenol	< .01	mg/l			WG611581	09/10/12 02:50
4-Chlorophenyl-phenylether	< .01	mg/l			WG611581	09/10/12 02:50
4-Nitrophenol	< .01	mg/l			WG611581	09/10/12 02:50
Acenaphthene	< .001	mg/l			WG611581	09/10/12 02:50
Acenaphthylene	< .001	mg/l			WG611581	09/10/12 02:50
Anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzidine	< .01	mg/l			WG611581	09/10/12 02:50
Benzo(a)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(a)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(b)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(g,h,i)perylene	< .001	mg/l			WG611581	09/10/12 02:50
Benzo(k)fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Benzylbutyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Bis(2-chlorethoxy)methane	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroethyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG611581	09/10/12 02:50
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Chrysene	< .001	mg/l			WG611581	09/10/12 02:50
Di-n-butyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Di-n-octyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dibenz(a,h)anthracene	< .001	mg/l			WG611581	09/10/12 02:50
Diethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Dimethyl phthalate	< .003	mg/l			WG611581	09/10/12 02:50
Fluoranthene	< .001	mg/l			WG611581	09/10/12 02:50
Fluorene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachloro-1,3-butadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachlorobenzene	< .001	mg/l			WG611581	09/10/12 02:50
Hexachlorocyclopentadiene	< .01	mg/l			WG611581	09/10/12 02:50
Hexachloroethane	< .01	mg/l			WG611581	09/10/12 02:50
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG611581	09/10/12 02:50
Isophorone	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodi-n-propylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodimethylamine	< .01	mg/l			WG611581	09/10/12 02:50
n-Nitrosodiphenylamine	< .01	mg/l			WG611581	09/10/12 02:50
Naphthalene	< .001	mg/l			WG611581	09/10/12 02:50
Nitrobenzene	< .01	mg/l			WG611581	09/10/12 02:50
Pentachlorophenol	< .001	mg/l			WG611581	09/10/12 02:50
Phenanthrene	< .001	mg/l			WG611581	09/10/12 02:50
Phenol	< .01	mg/l			WG611581	09/10/12 02:50
Pyrene	< .001	mg/l			WG611581	09/10/12 02:50
2,4,6-Tribromophenol		% Rec.	62.74	16-147	WG611581	09/10/12 02:50
2-Fluorobiphenyl		% Rec.	64.92	29-127	WG611581	09/10/12 02:50
2-Fluorophenol		% Rec.	49.60	10-75	WG611581	09/10/12 02:50
Nitrobenzene-d5		% Rec.	56.02	17-119	WG611581	09/10/12 02:50
Phenol-d5		% Rec.	35.58	10-63	WG611581	09/10/12 02:50
p-Terphenyl-d14		% Rec.	75.12	40-174	WG611581	09/10/12 02:50
TOC (Total Organic Carbon)	< 1	mg/l			WG611858	09/11/12 09:05
Mercury,Dissolved	< .0002	mg/l			WG611391	09/11/12 17:38
Barium,Dissolved	< .005	mg/l			WG612075	09/13/12 02:12

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Quality Assurance Report  
Level II

L593599

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Boron,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Calcium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Chromium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Cobalt,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Copper,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Iron,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Lithium,Dissolved	< .015	mg/l			WG612075	09/13/12 02:12
Magnesium,Dissolved	< .1	mg/l			WG612075	09/13/12 02:12
Manganese,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Nickel,Dissolved	< .02	mg/l			WG612075	09/13/12 02:12
Potassium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Silicon,Dissolved	< .2	mg/l			WG612075	09/13/12 02:12
Sodium,Dissolved	< .5	mg/l			WG612075	09/13/12 02:12
Strontium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Vanadium,Dissolved	< .01	mg/l			WG612075	09/13/12 02:12
Zinc,Dissolved	< .03	mg/l			WG612075	09/13/12 02:12
Antimony,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55
Selenium,Dissolved	< .001	mg/l			WG612100	09/14/12 13:55

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Bromide	mg/l	0	0		0	20	L593598-01	WG611421
Chloride	mg/l	19.0	19.0		0	20	L593598-01	WG611421
Sulfate	mg/l	85.0	85.0		0.469	20	L593598-01	WG611421
Sulfate	mg/l	200.	200.		1.49	20	L593408-01	WG611421
Specific Conductance	umhos/cm	900.	900.		0.222	20	L592821-03	WG611526
Specific Conductance	umhos/cm	79.0	79.0		0.505	20	L593699-01	WG611526
Arsenic,Dissolved	mg/l	0	0.000890		NA	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.00200	0.00199		0.501*	0	L592767-01	WG611718
Potassium,Dissolved	mg/l	2.00	1.90		5.63	20	L593599-01	WG611671
Fluoride	mg/l	1.20	1.20		1.65	20	L593548-02	WG611624
Dissolved Solids	mg/l	740.	735.		0.813	5	L593707-02	WG611507
pH	su	7.60	7.70		1.57*	1	L593548-01	WG611870
pH	su	8.20	8.20		0.487	1	L593865-01	WG611870
Alkalinity	mg/l	130.	130.		2.28	20	L593453-01	WG611833
Alkalinity	mg/l	510.	510.		0.393	20	L593548-02	WG611833
TOC (Total Organic Carbon)	mg/l	2.00	2.10		4.88	20	L593499-02	WG611858
TOC (Total Organic Carbon)	mg/l	7.30	8.30		13.1	20	L593807-01	WG611858

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YOUR LAB OF CHOICE

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Mercury,Dissolved	mg/l	0	0	0	20	L593600-01	WG611391
Barium,Dissolved	mg/l	0.0330	0.0342	3.87	20	L593221-01	WG612075
Boron,Dissolved	mg/l	0	0.0533	NA	0	L593221-01	WG612075
Calcium,Dissolved	mg/l	38.0	38.0	0	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	0	0.00170	NA	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	0	0.000900	NA	20	L593221-01	WG612075
Copper,Dissolved	mg/l	0	0.0122	NA	20	L593221-01	WG612075
Iron,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0	0.00370	NA	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	11.0	11.0	3.70	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	0.0140	0.0150	4.08	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0	0	0	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	1.40	1.53	10.3	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	2.60	2.67	1.13*	0	L593221-01	WG612075
Sodium,Dissolved	mg/l	5.80	5.90	1.19	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	0.110	0.115	2.64	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	0	0.00140	NA	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	0	0.00960	NA	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0	0	0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.00990	0.00500	65.9*	20	L593600-01	WG612100

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0286	115.	77-128	WG611310
1,1,1-Trichloroethane	mg/l	.025	0.0239	95.8	71-126	WG611310
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0246	98.3	78-130	WG611310
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81-121	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	.025	0.0290	116.	53-143	WG611310
1,1-Dichloroethane	mg/l	.025	0.0225	90.1	73-123	WG611310
1,1-Dichloroethene	mg/l	.025	0.0242	96.9	54-134	WG611310
1,1-Dichloropropene	mg/l	.025	0.0234	93.4	67-127	WG611310
1,2,3-Trichlorobenzene	mg/l	.025	0.0298	119.	77-130	WG611310
1,2,3-Trichloropropane	mg/l	.025	0.0274	110.	68-130	WG611310
1,2,3-Trimethylbenzene	mg/l	.025	0.0226	90.3	77-126	WG611310
1,2,4-Trichlorobenzene	mg/l	.025	0.0303	121.	76-127	WG611310
1,2,4-Trimethylbenzene	mg/l	.025	0.0280	112.	77-129	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0263	105.	55-142	WG611310
1,2-Dibromoethane	mg/l	.025	0.0279	112.	78-124	WG611310
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG611310
1,2-Dichloroethane	mg/l	.025	0.0214	85.5	69-128	WG611310
1,2-Dichloropropane	mg/l	.025	0.0230	92.0	77-121	WG611310
1,3,5-Trimethylbenzene	mg/l	.025	0.0274	109.	78-127	WG611310
1,3-Dichlorobenzene	mg/l	.025	0.0297	119.	77-127	WG611310
1,3-Dichloropropane	mg/l	.025	0.0246	98.5	78-117	WG611310
1,4-Dichlorobenzene	mg/l	.025	0.0249	99.5	79-117	WG611310
2,2-Dichloropropane	mg/l	.025	0.0238	95.1	63-130	WG611310
2-Butanone (MEK)	mg/l	.125	0.130	104.	58-144	WG611310
2-Chloroethyl vinyl ether	mg/l	.125	0.0382	30.6	26-172	WG611310
2-Chlorotoluene	mg/l	.025	0.0252	101.	78-123	WG611310
4-Chlorotoluene	mg/l	.025	0.0268	107.	78-122	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.112	89.8	58-147	WG611310
Acetone	mg/l	.125	0.126	101.	49-153	WG611310
Acrolein	mg/l	.125	0.0866	69.3	10-181	WG611310
Acrylonitrile	mg/l	.125	0.114	91.5	53-153	WG611310

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0237	94.7	72-119	WG611310
Bromobenzene	mg/l	.025	0.0252	101.	76-121	WG611310
Bromodichloromethane	mg/l	.025	0.0243	97.1	75-127	WG611310
Bromoform	mg/l	.025	0.0333	133.	61-136	WG611310
Bromomethane	mg/l	.025	0.0275	110.	42-172	WG611310
Carbon tetrachloride	mg/l	.025	0.0249	99.5	63-129	WG611310
Chlorobenzene	mg/l	.025	0.0284	114.	78-123	WG611310
Chlorodibromomethane	mg/l	.025	0.0285	114.	73-128	WG611310
Chloroethane	mg/l	.025	0.0207	82.8	52-164	WG611310
Chloroform	mg/l	.025	0.0232	92.7	76-122	WG611310
Chloromethane	mg/l	.025	0.0168	67.3	50-141	WG611310
cis-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	75-121	WG611310
cis-1,3-Dichloropropene	mg/l	.025	0.0249	99.8	74-124	WG611310
Di-isopropyl ether	mg/l	.025	0.0194	77.5	66-129	WG611310
Dibromomethane	mg/l	.025	0.0254	102.	77-124	WG611310
Dichlorodifluoromethane	mg/l	.025	0.0179	71.7	33-173	WG611310
Ethylbenzene	mg/l	.025	0.0276	111.	77-124	WG611310
Hexachloro-1,3-butadiene	mg/l	.025	0.0254	102.	71-134	WG611310
Isopropylbenzene	mg/l	.025	0.0290	116.	74-126	WG611310
Methyl tert-butyl ether	mg/l	.025	0.0239	95.5	67-127	WG611310
Methylene Chloride	mg/l	.025	0.0230	92.2	67-122	WG611310
n-Butylbenzene	mg/l	.025	0.0236	94.5	74-130	WG611310
n-Propylbenzene	mg/l	.025	0.0267	107.	77-125	WG611310
Naphthalene	mg/l	.025	0.0263	105.	70-134	WG611310
p-Isopropyltoluene	mg/l	.025	0.0299	119.	77-132	WG611310
sec-Butylbenzene	mg/l	.025	0.0277	111.	77-130	WG611310
Styrene	mg/l	.025	0.0281	113.	69-145	WG611310
tert-Butylbenzene	mg/l	.025	0.0282	113.	76-131	WG611310
Tetrachloroethene	mg/l	.025	0.0315	126.	69-131	WG611310
Toluene	mg/l	.025	0.0251	100.	75-114	WG611310
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG611310
trans-1,3-Dichloropropene	mg/l	.025	0.0273	109.	69-124	WG611310
Trichloroethene	mg/l	.025	0.0282	113.	69-131	WG611310
Trichlorofluoromethane	mg/l	.025	0.0234	93.8	53-161	WG611310
Vinyl chloride	mg/l	.025	0.0192	76.7	55-142	WG611310
Xylenes, Total	mg/l	.075	0.0845	113.	77-123	WG611310
4-Bromofluorobenzene				107.5	82-120	WG611310
Dibromofluoromethane				92.41	82-126	WG611310
Toluene-d8				100.8	92-112	WG611310
Ethane	mg/l	.645	0.702	109.	70-130	WG611471
Ethene	mg/l	.635	0.677	107.	70-130	WG611471
Methane	mg/l	.339	0.355	105.	70-130	WG611471
Bromide	mg/l	40	39.6	99.0	90-110	WG611421
Chloride	mg/l	40	39.6	99.0	90-110	WG611421
Sulfate	mg/l	40	39.8	99.5	90-110	WG611421
Specific Conductance	umhos/cm	1050	1170	111.	85-115	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.5	6.00	109.	70-124	WG611405
a,a,a-Trifluorotoluene(FID)				105.1	62-128	WG611405
Arsenic,Dissolved	mg/l	.0567	0.0487	85.9	85-115	WG611718

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		Known Val	Result			
Molybdenum,Dissolved	mg/l	.0567	0.0598	105.	85-115	WG611718
TPH (GC/FID) High Fraction	ppm	1.5	1.50	100.	50-150	WG611577
o-Terphenyl				100.5	50-150	WG611577
Potassium,Dissolved	mg/l	11.3	11.7	104.	85-115	WG611671
Fluoride	mg/l	8	7.97	99.6	90-110	WG611624
Dissolved Solids	mg/l	8800	8630	98.1	85-115	WG611507
pH	su	6.03	6.01	99.7	98-101	WG611870
Alkalinity	mg/l	100	106.	106.	85-115	WG611833
1,2,4-Trichlorobenzene	mg/l	.01	0.00658	65.8	18-130	WG611581
2,4,6-Trichlorophenol	mg/l	.01	0.00716	71.6	12-147	WG611581
2,4-Dichlorophenol	mg/l	.01	0.00695	69.5	10-157	WG611581
2,4-Dimethylphenol	mg/l	.01	0.00832	83.2	19-160	WG611581
2,4-Dinitrophenol	mg/l	.01	0.00864	86.4	10-135	WG611581
2,4-Dinitrotoluene	mg/l	.01	0.00587	58.7	30-168	WG611581
2,6-Dinitrotoluene	mg/l	.01	0.00629	62.9	32-163	WG611581
2-Chloronaphthalene	mg/l	.01	0.00637	63.7	29-149	WG611581
2-Chlorophenol	mg/l	.01	0.00662	66.2	16-129	WG611581
2-Nitrophenol	mg/l	.01	0.00674	67.4	14-158	WG611581
3,3-Dichlorobenzidine	mg/l	.01	0.00605	60.5	42-150	WG611581
4,6-Dinitro-2-methylphenol	mg/l	.01	0.00818	81.8	10-164	WG611581
4-Bromophenyl-phenylether	mg/l	.01	0.00798	79.8	40-166	WG611581
4-Chloro-3-methylphenol	mg/l	.01	0.00677	67.7	14-158	WG611581
4-Chlorophenyl-phenylether	mg/l	.01	0.00742	74.2	39-155	WG611581
4-Nitrophenol	mg/l	.01	0.00177	17.7	10-61	WG611581
Acenaphthene	mg/l	.01	0.00619	61.9	37-159	WG611581
Acenaphthylene	mg/l	.01	0.00670	67.0	34-162	WG611581
Anthracene	mg/l	.01	0.00673	67.3	48-167	WG611581
Benzidine	mg/l	.01	0.00157	15.7	10-86	WG611581
Benzo(a)anthracene	mg/l	.01	0.00687	68.7	46-167	WG611581
Benzo(a)pyrene	mg/l	.01	0.00661	66.1	39-167	WG611581
Benzo(b)fluoranthene	mg/l	.01	0.00713	71.3	39-173	WG611581
Benzo(g,h,i)perylene	mg/l	.01	0.00698	69.8	42-181	WG611581
Benzo(k)fluoranthene	mg/l	.01	0.00748	74.8	42-178	WG611581
Benzylbutyl phthalate	mg/l	.01	0.00747	74.7	10-178	WG611581
Bis(2-chlorethoxy)methane	mg/l	.01	0.00741	74.1	34-155	WG611581
Bis(2-chloroethyl)ether	mg/l	.01	0.00402	40.2	22-149	WG611581
Bis(2-chloroisopropyl)ether	mg/l	.01	0.00642	64.2	26-149	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	.01	0.00711	71.1	42-191	WG611581
Chrysene	mg/l	.01	0.00751	75.1	46-170	WG611581
Di-n-butyl phthalate	mg/l	.01	0.00764	76.4	33-175	WG611581
Di-n-octyl phthalate	mg/l	.01	0.00666	66.6	40-170	WG611581
Dibenz(a,h)anthracene	mg/l	.01	0.00659	65.9	43-187	WG611581
Diethyl phthalate	mg/l	.01	0.00807	80.7	10-182	WG611581
Dimethyl phthalate	mg/l	.01	0.00813	81.3	10-165	WG611581
Fluoranthene	mg/l	.01	0.00699	69.9	46-171	WG611581

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Fluorene	mg/l	.01	0.00659	65.9	39-163	WG611581
Hexachloro-1,3-butadiene	mg/l	.01	0.00703	70.3	18-136	WG611581
Hexachlorobenzene	mg/l	.01	0.00782	78.2	38-163	WG611581
Hexachlorocyclopentadiene	mg/l	.01	0.00749	74.9	10-142	WG611581
Hexachloroethane	mg/l	.01	0.00529	52.9	10-130	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	.01	0.00678	67.8	42-184	WG611581
Isophorone	mg/l	.01	0.00739	73.9	36-166	WG611581
n-Nitrosodi-n-propylamine	mg/l	.01	0.00675	67.5	27-157	WG611581
n-Nitrosodimethylamine	mg/l	.01	0.00328	32.8	10-96	WG611581
n-Nitrosodiphenylamine	mg/l	.01	0.00664	66.4	41-168	WG611581
Naphthalene	mg/l	.01	0.00632	63.2	26-147	WG611581
Nitrobenzene	mg/l	.01	0.00764	76.4	22-154	WG611581
Pentachlorophenol	mg/l	.01	0.00393	39.3	10-128	WG611581
Phenanthrene	mg/l	.01	0.00675	67.5	46-163	WG611581
Phenol	mg/l	.01	0.00417	41.7	10-69	WG611581
Pyrene	mg/l	.01	0.00824	82.4	45-176	WG611581
2,4,6-Tribromophenol				77.84	16-147	WG611581
2-Fluorobiphenyl				70.36	29-127	WG611581
2-Fluorophenol				54.46	10-75	WG611581
Nitrobenzene-d5				66.24	17-119	WG611581
Phenol-d5				35.22	10-63	WG611581
p-Terphenyl-d14				77.90	40-174	WG611581
TOC (Total Organic Carbon)	mg/l	75	71.4	95.1	85-115	WG611858
Mercury,Dissolved	mg/l	.003	0.00265	88.3	85-115	WG611391
Barium,Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Boron,Dissolved	mg/l	1	0.974	97.4	85-115	WG612075
Calcium,Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Chromium,Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Cobalt,Dissolved	mg/l	1	1.09	109.	85-115	WG612075
Copper,Dissolved	mg/l	1	1.02	102.	85-115	WG612075
Iron,Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Lithium,Dissolved	mg/l	.5	0.577	115.*	85-115	WG612075
Magnesium,Dissolved	mg/l	10	10.5	105.	85-115	WG612075
Manganese,Dissolved	mg/l	1	1.06	106.	85-115	WG612075
Nickel,Dissolved	mg/l	1	0.984	98.4	85-115	WG612075
Potassium,Dissolved	mg/l	10	10.3	103.	85-115	WG612075
Silicon,Dissolved	mg/l	1	0.986	98.6	85-115	WG612075
Sodium,Dissolved	mg/l	10	10.8	108.	85-115	WG612075
Strontium,Dissolved	mg/l	1	1.05	105.	85-115	WG612075
Vanadium,Dissolved	mg/l	1	1.01	101.	85-115	WG612075
Zinc,Dissolved	mg/l	1	1.07	107.	85-115	WG612075
Antimony,Dissolved	mg/l	.05	0.0496	99.2	85-115	WG612100
Selenium,Dissolved	mg/l	.05	0.0458	91.6	85-115	WG612100

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/l	0.0290	0.0286	116.	77-128	1.11	20	WG611310
1,1,1-Trichloroethane	mg/l	0.0233	0.0239	93.0	71-126	2.70	20	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0244	0.0246	98.0	78-130	0.530	20	WG611310
1,1,2-Trichloroethane	mg/l	0.0267	0.0269	107.	81-121	0.900	20	WG611310

\* 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

Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100

Parachute, CO 81635

Quality Assurance Report  
Level II

L593599

12065 Lebanon Rd.  
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Est. 1970

September 16, 2012

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,1,2-Trichlorotrifluoroethane	mg/l	0.0280	0.0290	112.	53-143	3.45	20	WG611310
1,1-Dichloroethane	mg/l	0.0225	0.0225	90.0	73-123	0.290	20	WG611310
1,1-Dichloroethene	mg/l	0.0239	0.0242	96.0	54-134	1.43	20	WG611310
1,1-Dichloropropene	mg/l	0.0231	0.0234	92.0	67-127	1.21	20	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0298	0.0298	119.	77-130	0.0300	20	WG611310
1,2,3-Trichloropropane	mg/l	0.0264	0.0274	106.	68-130	3.63	20	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0228	0.0226	91.0	77-126	0.970	20	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0301	0.0303	120.	76-127	0.450	20	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0281	0.0280	112.	77-129	0.360	20	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0267	0.0263	107.	55-142	1.68	20	WG611310
1,2-Dibromoethane	mg/l	0.0287	0.0279	115.	78-124	2.72	20	WG611310
1,2-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82-121	0.440	20	WG611310
1,2-Dichloroethane	mg/l	0.0210	0.0214	84.0	69-128	1.82	20	WG611310
1,2-Dichloropropane	mg/l	0.0233	0.0230	93.0	77-121	1.46	20	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0278	0.0274	111.	78-127	1.56	20	WG611310
1,3-Dichlorobenzene	mg/l	0.0300	0.0297	120.	77-127	1.22	20	WG611310
1,3-Dichloropropane	mg/l	0.0245	0.0246	98.0	78-117	0.650	20	WG611310
1,4-Dichlorobenzene	mg/l	0.0242	0.0249	97.0	79-117	2.74	20	WG611310
2,2-Dichloropropane	mg/l	0.0233	0.0238	93.0	63-130	2.20	20	WG611310
2-Butanone (MEK)	mg/l	0.126	0.130	101.	58-144	2.78	20	WG611310
2-Chloroethyl vinyl ether	mg/l	0.0385	0.0382	31.0	26-172	0.680	22	WG611310
2-Chlorotoluene	mg/l	0.0252	0.0252	101.	78-123	0.210	20	WG611310
4-Chlorotoluene	mg/l	0.0266	0.0268	106.	78-122	0.700	20	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.110	0.112	88.0	58-147	1.62	20	WG611310
Acetone	mg/l	0.118	0.126	94.0	49-153	6.45	21	WG611310
Acrolein	mg/l	0.0844	0.0866	68.0	10-181	2.65	30	WG611310
Acrylonitrile	mg/l	0.110	0.114	88.0	53-153	3.85	20	WG611310
Benzene	mg/l	0.0233	0.0237	93.0	72-119	1.50	20	WG611310
Bromobenzene	mg/l	0.0251	0.0252	100.	76-121	0.660	20	WG611310
Bromodichloromethane	mg/l	0.0244	0.0243	98.0	75-127	0.430	20	WG611310
Bromoform	mg/l	0.0331	0.0333	132.	61-136	0.610	20	WG611310
Bromomethane	mg/l	0.0260	0.0275	104.	42-172	5.67	20	WG611310
Carbon tetrachloride	mg/l	0.0242	0.0249	97.0	63-129	2.98	20	WG611310
Chlorobenzene	mg/l	0.0285	0.0284	114.	78-123	0.190	20	WG611310
Chlorodibromomethane	mg/l	0.0283	0.0285	113.	73-128	0.700	20	WG611310
Chloroethane	mg/l	0.0200	0.0207	80.0	52-164	3.58	20	WG611310
Chloroform	mg/l	0.0229	0.0232	91.0	76-122	1.25	20	WG611310
Chloromethane	mg/l	0.0167	0.0168	67.0	50-141	0.540	20	WG611310
cis-1,2-Dichloroethene	mg/l	0.0247	0.0246	99.0	75-121	0.360	20	WG611310
cis-1,3-Dichloropropene	mg/l	0.0247	0.0249	99.0	74-124	0.880	20	WG611310
Di-isopropyl ether	mg/l	0.0193	0.0194	77.0	66-129	0.240	20	WG611310
Dibromomethane	mg/l	0.0256	0.0254	102.	77-124	0.640	20	WG611310
Dichlorodifluoromethane	mg/l	0.0174	0.0179	70.0	33-173	2.98	20	WG611310
Ethylbenzene	mg/l	0.0278	0.0276	111.	77-124	0.600	20	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0256	0.0254	102.	71-134	0.940	20	WG611310
Isopropylbenzene	mg/l	0.0284	0.0290	114.	74-126	1.97	20	WG611310
Methyl tert-butyl ether	mg/l	0.0235	0.0239	94.0	67-127	1.64	20	WG611310
Methylene Chloride	mg/l	0.0225	0.0230	90.0	67-122	2.28	20	WG611310
n-Butylbenzene	mg/l	0.0230	0.0236	92.0	74-130	2.59	20	WG611310
n-Propylbenzene	mg/l	0.0268	0.0267	107.	77-125	0.580	20	WG611310
Naphthalene	mg/l	0.0259	0.0263	104.	70-134	1.21	20	WG611310
p-Isopropyltoluene	mg/l	0.0296	0.0299	118.	77-132	1.00	20	WG611310
sec-Butylbenzene	mg/l	0.0274	0.0277	109.	77-130	1.10	20	WG611310
Styrene	mg/l	0.0285	0.0281	114.	69-145	1.35	20	WG611310
tert-Butylbenzene	mg/l	0.0282	0.0282	113.	76-131	0.280	20	WG611310
Tetrachloroethene	mg/l	0.0319	0.0315	127.	69-131	1.24	20	WG611310
Toluene	mg/l	0.0251	0.0251	100.	75-114	0.0200	20	WG611310
trans-1,2-Dichloroethene	mg/l	0.0250	0.0251	100.	63-127	0.400	20	WG611310
trans-1,3-Dichloropropene	mg/l	0.0278	0.0273	111.	69-124	1.79	20	WG611310

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Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Trichloroethene	mg/l	0.0276	0.0282	110.		69-131	1.92	20	WG611310
Trichlorofluoromethane	mg/l	0.0229	0.0234	92.0		53-161	2.39	20	WG611310
Vinyl chloride	mg/l	0.0187	0.0192	75.0		55-142	2.35	20	WG611310
Xylenes, Total	mg/l	0.0846	0.0845	113.		77-123	0.100	20	WG611310
4-Bromofluorobenzene				107.9		82-120			WG611310
Dibromofluoromethane				90.87		82-126			WG611310
Toluene-d8				100.9		92-112			WG611310
Ethane	mg/l	0.752	0.702	116.		70-130	6.80	25	WG611471
Ethene	mg/l	0.724	0.677	114.		70-130	6.79	25	WG611471
Methane	mg/l	0.381	0.355	112.		70-130	7.23	25	WG611471
Bromide	mg/l	39.4	39.6	98.0		90-110	0.506	20	WG611421
Chloride	mg/l	39.5	39.6	99.0		90-110	0.253	20	WG611421
Sulfate	mg/l	39.5	39.8	99.0		90-110	0.757	20	WG611421
Specific Conductance	umhos/	1170	1170	112.		85-115	0.0854	20	WG611526
TPH (GC/FID) Low Fraction	mg/l	5.91	6.00	107.		70-124	1.49	20	WG611405
a,a,a-Trifluorotoluene(FID)				106.4		62-128			WG611405
TPH (GC/FID) High Fraction	ppm	1.40	1.50	93.0		50-150	6.90	20	WG611577
o-Terphenyl				96.62		50-150			WG611577
Fluoride	mg/l	7.95	7.97	99.0		90-110	0.251	20	WG611624
Dissolved Solids	mg/l	8640	8630	98.0		85-115	0.0463	5	WG611507
pH	su	6.03	6.01	100.		98-101	0.332	20	WG611870
Alkalinity	mg/l	96.9	106.	97.0		85-115	8.97	20	WG611833
1,2,4-Trichlorobenzene	mg/l	0.00588	0.00658	59.0		18-130	11.1	32	WG611581
2,4,6-Trichlorophenol	mg/l	0.00637	0.00716	64.0		12-147	11.7	40	WG611581
2,4-Dichlorophenol	mg/l	0.00602	0.00695	60.0		10-157	14.4	40	WG611581
2,4-Dimethylphenol	mg/l	0.00642	0.00832	64.0		19-160	25.8	40	WG611581
2,4-Dinitrophenol	mg/l	0.00766	0.00864	77.0		10-135	12.0	40	WG611581
2,4-Dinitrotoluene	mg/l	0.00489	0.00587	49.0		30-168	18.3	32	WG611581
2,6-Dinitrotoluene	mg/l	0.00560	0.00629	56.0		32-163	11.5	30	WG611581
2-Chloronaphthalene	mg/l	0.00525	0.00637	52.0		29-149	19.3	34	WG611581
2-Chlorophenol	mg/l	0.00577	0.00662	58.0		16-129	13.8	40	WG611581
2-Nitrophenol	mg/l	0.00514	0.00674	51.0		14-158	27.0	40	WG611581
3,3-Dichlorobenzidine	mg/l	0.00579	0.00605	58.0		42-150	4.28	29	WG611581
4,6-Dinitro-2-methylphenol	mg/l	0.00743	0.00818	74.0		10-164	9.55	40	WG611581
4-Bromophenyl-phenylether	mg/l	0.00693	0.00798	69.0		40-166	14.2	36	WG611581
4-Chloro-3-methylphenol	mg/l	0.00570	0.00677	57.0		14-158	17.2	40	WG611581
4-Chlorophenyl-phenylether	mg/l	0.00672	0.00742	67.0		39-155	9.78	33	WG611581
4-Nitrophenol	mg/l	0.00149	0.00177	15.0		10-61	17.2	40	WG611581
Acenaphthene	mg/l	0.00538	0.00619	54.0		37-159	13.9	30	WG611581

\* Performance of this Analyte is outside of established criteria.

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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Acenaphthylene	mg/l	0.00554	0.00670	55.0	34-162	18.9	31	WG611581
Anthracene	mg/l	0.00579	0.00673	58.0	48-167	15.1	26	WG611581
Benzidine	mg/l	0.00251	0.00157	25.0	10-86	46.3*	40	WG611581
Benzo(a)anthracene	mg/l	0.00627	0.00687	63.0	46-167	9.16	29	WG611581
Benzo(a)pyrene	mg/l	0.00555	0.00661	56.0	39-167	17.4	29	WG611581
Benzo(b)fluoranthene	mg/l	0.00652	0.00713	65.0	39-173	8.92	32	WG611581
Benzo(g,h,i)perylene	mg/l	0.00594	0.00698	59.0	42-181	16.0	30	WG611581
Benzo(k)fluoranthene	mg/l	0.00637	0.00748	64.0	42-178	16.1	33	WG611581
Benzylbutyl phthalate	mg/l	0.00600	0.00747	60.0	10-178	21.9	40	WG611581
Bis(2-chlorethoxy)methane	mg/l	0.00614	0.00741	61.0	34-155	18.7	31	WG611581
Bis(2-chloroethyl)ether	mg/l	0.00394	0.00402	39.0	22-149	2.15	38	WG611581
Bis(2-chloroisopropyl)ether	mg/l	0.00553	0.00642	55.0	26-149	14.8	34	WG611581
Bis(2-ethylhexyl)phthalate	mg/l	0.00655	0.00711	65.0	42-191	8.25	33	WG611581
Chrysene	mg/l	0.00654	0.00751	65.0	46-170	13.9	30	WG611581
Di-n-butyl phthalate	mg/l	0.00650	0.00764	65.0	33-175	16.1	39	WG611581
Di-n-octyl phthalate	mg/l	0.00599	0.00666	60.0	40-170	10.6	28	WG611581
Dibenz(a,h)anthracene	mg/l	0.00566	0.00659	56.0	43-187	15.3	31	WG611581
Diethyl phthalate	mg/l	0.00721	0.00807	72.0	10-182	11.3	35	WG611581
Dimethyl phthalate	mg/l	0.00694	0.00813	69.0	10-165	15.8	37	WG611581
Fluoranthene	mg/l	0.00625	0.00699	62.0	46-171	11.3	37	WG611581
Fluorene	mg/l	0.00616	0.00659	62.0	39-163	6.71	36	WG611581
Hexachloro-1,3-butadiene	mg/l	0.00625	0.00703	62.0	18-136	11.7	30	WG611581
Hexachlorobenzene	mg/l	0.00739	0.00782	74.0	38-163	5.62	35	WG611581
Hexachlorocyclopentadiene	mg/l	0.00703	0.00749	70.0	10-142	6.29	40	WG611581
Hexachloroethane	mg/l	0.00478	0.00529	48.0	10-130	10.2	39	WG611581
Indeno(1,2,3-cd)pyrene	mg/l	0.00580	0.00678	58.0	42-184	15.6	32	WG611581
Isophorone	mg/l	0.00635	0.00739	63.0	36-166	15.2	35	WG611581
n-Nitrosodi-n-propylamine	mg/l	0.00544	0.00675	54.0	27-157	21.4	31	WG611581
n-Nitrosodimethylamine	mg/l	0.00281	0.00328	28.0	10-96	15.7	36	WG611581
n-Nitrosodiphenylamine	mg/l	0.00583	0.00664	58.0	41-168	12.8	37	WG611581
Naphthalene	mg/l	0.00540	0.00632	54.0	26-147	15.6	31	WG611581
Nitrobenzene	mg/l	0.00684	0.00764	68.0	22-154	11.1	37	WG611581
Pentachlorophenol	mg/l	0.00277	0.00393	28.0	10-128	34.4	40	WG611581
Phenanthrene	mg/l	0.00562	0.00675	56.0	46-163	18.3	29	WG611581
Phenol	mg/l	0.00386	0.00417	38.0	10-69	7.86	40	WG611581
Pyrene	mg/l	0.00710	0.00824	71.0	45-176	14.8	28	WG611581
2,4,6-Tribromophenol				69.80	16-147			WG611581
2-Fluorobiphenyl				58.58	29-127			WG611581
2-Fluorophenol				54.17	10-75			WG611581
Nitrobenzene-d5				59.27	17-119			WG611581
Phenol-d5				36.60	10-63			WG611581
p-Terphenyl-d14				69.24	40-174			WG611581
TOC (Total Organic Carbon)	mg/l	71.1	71.4	95.0	85-115	0.351	20	WG611858

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0	.025	108.	71-130	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0215	0	.025	86.0	58-137	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0238	0	.025	95.1	64-149	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0257	0	.025	103.	73-128	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0257	0	.025	103.	36-159	L593548-01	WG611310
1,1-Dichloroethane	mg/l	0.0205	0	.025	82.0	58-133	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0215	0	.025	86.2	32-152	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0209	0	.025	83.7	50-140	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0	.025	114.	68-135	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0263	0	.025	105.	74-137	L593548-01	WG611310

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YOUR LAB OF CHOICE

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Aaron Stacy  
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Quality Assurance Report  
Level II

L593599

12065 Lebanon Rd.  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 16, 2012

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,3-Trimethylbenzene	mg/l	0.0209	0	.025	83.7	67-133	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0284	0	.025	114.	67-133	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0262	0	.025	105.	62-141	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0	.025	104.	55-148	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0273	0	.025	109.	71-129	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.3	75-125	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0200	0	.025	79.9	59-135	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0212	0	.025	84.8	68-126	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0255	0	.025	102.	67-136	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0281	0	.025	112.	69-131	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0238	0	.025	95.3	70-122	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0232	0	.025	93.0	70-123	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0216	0	.025	86.2	51-141	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0898	0	.125	71.8	51-149	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00855	0	.125	6.84*	10-161	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0234	0	.025	93.6	65-133	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0248	0	.025	99.3	67-129	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.106	0	.125	84.6	53-154	L593548-01	WG611310
Acetone	mg/l	0.0528	0	.125	42.2	34-146	L593548-01	WG611310
Acrolein	mg/l	0.0715	0	.125	57.2	10-189	L593548-01	WG611310
Acrylonitrile	mg/l	0.110	0	.125	88.3	49-162	L593548-01	WG611310
Benzene	mg/l	0.0216	0	.025	86.2	51-134	L593548-01	WG611310
Bromobenzene	mg/l	0.0237	0	.025	95.0	64-130	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0228	0	.025	91.2	67-132	L593548-01	WG611310
Bromoform	mg/l	0.0318	0	.025	127.	59-137	L593548-01	WG611310
Bromomethane	mg/l	0.0244	0	.025	97.6	23-177	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0223	0	.025	89.2	49-140	L593548-01	WG611310
Chlorobenzene	mg/l	0.0264	0	.025	106.	69-126	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0272	0	.025	109.	68-130	L593548-01	WG611310
Chloroethane	mg/l	0.0182	0	.025	72.8	32-177	L593548-01	WG611310
Chloroform	mg/l	0.0209	0	.025	83.6	64-130	L593548-01	WG611310
Chloromethane	mg/l	0.0163	0	.025	65.3	27-155	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0226	0	.025	90.4	54-137	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0231	0	.025	92.3	63-127	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0180	0	.025	72.0	58-133	L593548-01	WG611310
Dibromomethane	mg/l	0.0246	0	.025	98.4	68-131	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0184	0	.025	73.6	16-188	L593548-01	WG611310
Ethylbenzene	mg/l	0.0261	0	.025	104.	64-135	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0239	0	.025	95.5	64-140	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0265	0	.025	106.	62-134	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0222	0	.025	89.0	55-136	L593548-01	WG611310
Methylene Chloride	mg/l	0.0208	0	.025	83.3	52-130	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0216	0	.025	86.3	62-142	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0250	0	.025	100.	62-137	L593548-01	WG611310
Naphthalene	mg/l	0.0255	0	.025	102.	65-140	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0277	0	.025	111.	64-142	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0256	0	.025	102.	67-139	L593548-01	WG611310
Styrene	mg/l	0.0269	0	.025	108.	58-152	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0263	0	.025	105.	66-139	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0293	0	.025	117.	56-139	L593548-01	WG611310
Toluene	mg/l	0.0231	0	.025	92.4	61-126	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0224	0	.025	89.6	45-137	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0265	0	.025	106.	59-130	L593548-01	WG611310
Trichloroethene	mg/l	0.0255	0	.025	102.	40-155	L593548-01	WG611310
Trichlorofluoromethane	mg/l	0.0219	0	.025	87.6	35-177	L593548-01	WG611310
Vinyl chloride	mg/l	0.0184	0	.025	73.6	32-159	L593548-01	WG611310
Xylenes, Total	mg/l	0.0786	0	.075	105.	64-133	L593548-01	WG611310
4-Bromofluorobenzene					110.5	82-120		WG611310
Dibromofluoromethane					91.49	82-126		WG611310

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Toluene-d8					101.0	92-112		
Bromide	mg/l	47.6	0	50	95.2	80-120	L593597-01	WG611421
Chloride	mg/l	112.	64.0	50	96.0	80-120	L593597-01	WG611421
Sulfate	mg/l	515.	290.	50	90.0	80-120	L593597-01	WG611421
TPH (GC/FID) Low Fraction	mg/l	5.92	0	5.5	108.	55-109	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)					105.2	62-128		WG611405
Arsenic,Dissolved	mg/l	0.0479	0.000890	.0567	82.9	75-125	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0592	0.00199	.0567	101.	75-125	L592767-01	WG611718
Potassium,Dissolved	mg/l	13.6	1.90	11.3	104.	75-125	L593599-01	WG611671
Fluoride	mg/l	6.23	1.60	5	92.6	80-120	L593598-01	WG611624
Alkalinity	mg/l	233.	150.	100	83.0	80-120	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.0	1.80	50	102.	80-120	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00252	0	.003	84.0	70-130	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	0.0342	1	104.	75-125	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	0.0533	1	97.7	75-125	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.4	38.0	10	104.	75-125	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.06	0.00170	1	106.	75-125	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.08	0.000900	1	108.	75-125	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	0.0122	1	101.	75-125	L593221-01	WG612075
Iron,Dissolved	mg/l	1.06	0	1	106.	75-125	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.554	0.00370	.5	110.	75-125	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	11.0	10	99.0	75-125	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.06	0.0150	1	104.	75-125	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.970	0	1	97.0	75-125	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.6	1.53	10	101.	75-125	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.68	2.67	1	101.	75-125	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.2	5.90	10	103.	75-125	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.15	0.115	1	104.	75-125	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	0.00140	1	101.	75-125	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	0.00960	1	106.	75-125	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0460	0	.05	92.0	75-125	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0581	0.00500	.05	106.	75-125	L593600-01	WG612100

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.0291	0.0271	116.	71-130	6.97	20	L593548-01	WG611310
1,1,1-Trichloroethane	mg/l	0.0232	0.0215	92.6	58-137	7.38	20	L593548-01	WG611310
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0238	106.	64-149	10.7	20	L593548-01	WG611310
1,1,2-Trichloroethane	mg/l	0.0279	0.0257	112.	73-128	8.27	20	L593548-01	WG611310
1,1,2-Trichlorotrifluoroethane	mg/l	0.0275	0.0257	110.	36-159	6.85	21	L593548-01	WG611310

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1-Dichloroethane	mg/l	0.0219	0.0205	87.5	58-133	6.49	20	L593548-01	WG611310
1,1-Dichloroethene	mg/l	0.0227	0.0215	90.8	32-152	5.23	20	L593548-01	WG611310
1,1-Dichloropropene	mg/l	0.0222	0.0209	88.9	50-140	6.06	20	L593548-01	WG611310
1,2,3-Trichlorobenzene	mg/l	0.0285	0.0285	114.	68-135	0.0300	20	L593548-01	WG611310
1,2,3-Trichloropropane	mg/l	0.0289	0.0263	116.	74-137	9.52	20	L593548-01	WG611310
1,2,3-Trimethylbenzene	mg/l	0.0219	0.0209	87.6	67-133	4.58	20	L593548-01	WG611310
1,2,4-Trichlorobenzene	mg/l	0.0289	0.0284	115.	67-133	1.63	20	L593548-01	WG611310
1,2,4-Trimethylbenzene	mg/l	0.0284	0.0262	114.	62-141	8.15	20	L593548-01	WG611310
1,2-Dibromo-3-Chloropropane	mg/l	0.0276	0.0259	110.	55-148	6.27	22	L593548-01	WG611310
1,2-Dibromoethane	mg/l	0.0295	0.0273	118.	71-129	7.83	20	L593548-01	WG611310
1,2-Dichlorobenzene	mg/l	0.0241	0.0233	96.6	75-125	3.51	20	L593548-01	WG611310
1,2-Dichloroethane	mg/l	0.0214	0.0200	85.5	59-135	6.75	20	L593548-01	WG611310
1,2-Dichloropropane	mg/l	0.0220	0.0212	88.2	68-126	3.84	20	L593548-01	WG611310
1,3,5-Trimethylbenzene	mg/l	0.0281	0.0255	112.	67-136	9.61	20	L593548-01	WG611310
1,3-Dichlorobenzene	mg/l	0.0305	0.0281	122.	69-131	8.30	20	L593548-01	WG611310
1,3-Dichloropropane	mg/l	0.0255	0.0238	102.	70-122	6.65	20	L593548-01	WG611310
1,4-Dichlorobenzene	mg/l	0.0238	0.0232	95.2	70-123	2.35	20	L593548-01	WG611310
2,2-Dichloropropane	mg/l	0.0228	0.0216	91.4	51-141	5.82	20	L593548-01	WG611310
2-Butanone (MEK)	mg/l	0.0974	0.0898	77.9	51-149	8.12	22	L593548-01	WG611310
2-Chloroethyl vinyl ether	mg/l	0.00252	0.00855	2.02*	10-161	109.*	40	L593548-01	WG611310
2-Chlorotoluene	mg/l	0.0253	0.0234	101.	65-133	7.92	20	L593548-01	WG611310
4-Chlorotoluene	mg/l	0.0271	0.0248	108.	67-129	8.91	20	L593548-01	WG611310
4-Methyl-2-pentanone (MIBK)	mg/l	0.112	0.106	89.4	53-154	5.50	21	L593548-01	WG611310
Acetone	mg/l	0.0539	0.0528	43.1	34-146	2.07	22	L593548-01	WG611310
Acrolein	mg/l	0.0750	0.0715	60.0	10-189	4.87	30	L593548-01	WG611310
Acrylonitrile	mg/l	0.120	0.110	96.0	49-162	8.35	20	L593548-01	WG611310
Benzene	mg/l	0.0229	0.0216	91.6	51-134	6.09	20	L593548-01	WG611310
Bromobenzene	mg/l	0.0257	0.0237	103.	64-130	8.10	20	L593548-01	WG611310
Bromodichloromethane	mg/l	0.0236	0.0228	94.4	67-132	3.44	20	L593548-01	WG611310
Bromoform	mg/l	0.0347	0.0318	139.*	59-137	8.63	20	L593548-01	WG611310
Bromomethane	mg/l	0.0265	0.0244	106.	23-177	8.12	21	L593548-01	WG611310
Carbon tetrachloride	mg/l	0.0241	0.0223	96.2	49-140	7.54	20	L593548-01	WG611310
Chlorobenzene	mg/l	0.0289	0.0264	116.	69-126	9.06	20	L593548-01	WG611310
Chlorodibromomethane	mg/l	0.0294	0.0272	118.	68-130	7.53	20	L593548-01	WG611310
Chloroethane	mg/l	0.0201	0.0182	80.4	32-177	9.92	21	L593548-01	WG611310
Chloroform	mg/l	0.0226	0.0209	90.6	64-130	8.04	20	L593548-01	WG611310
Chloromethane	mg/l	0.0175	0.0163	70.0	27-155	6.95	20	L593548-01	WG611310
cis-1,2-Dichloroethene	mg/l	0.0241	0.0226	96.5	54-137	6.53	20	L593548-01	WG611310
cis-1,3-Dichloropropene	mg/l	0.0236	0.0231	94.3	63-127	2.19	20	L593548-01	WG611310
Di-isopropyl ether	mg/l	0.0191	0.0180	76.4	58-133	5.81	20	L593548-01	WG611310
Dibromomethane	mg/l	0.0255	0.0246	102.	68-131	3.44	20	L593548-01	WG611310
Dichlorodifluoromethane	mg/l	0.0196	0.0184	78.3	16-188	6.15	22	L593548-01	WG611310
Ethylbenzene	mg/l	0.0285	0.0261	114.	64-135	8.76	20	L593548-01	WG611310
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0239	97.0	64-140	1.51	20	L593548-01	WG611310
Isopropylbenzene	mg/l	0.0290	0.0265	116.	62-134	8.91	20	L593548-01	WG611310
Methyl tert-butyl ether	mg/l	0.0239	0.0222	95.7	55-136	7.28	20	L593548-01	WG611310
Methylene Chloride	mg/l	0.0223	0.0208	89.0	52-130	6.65	20	L593548-01	WG611310
n-Butylbenzene	mg/l	0.0224	0.0216	89.5	62-142	3.63	20	L593548-01	WG611310
n-Propylbenzene	mg/l	0.0270	0.0250	108.	62-137	7.53	20	L593548-01	WG611310
Naphthalene	mg/l	0.0266	0.0255	106.	65-140	3.99	20	L593548-01	WG611310
p-Isopropyltoluene	mg/l	0.0300	0.0277	120.	64-142	7.97	20	L593548-01	WG611310
sec-Butylbenzene	mg/l	0.0280	0.0256	112.	67-139	8.83	20	L593548-01	WG611310
Styrene	mg/l	0.0293	0.0269	117.	58-152	8.73	20	L593548-01	WG611310
tert-Butylbenzene	mg/l	0.0287	0.0263	115.	66-139	8.72	20	L593548-01	WG611310
Tetrachloroethene	mg/l	0.0320	0.0293	128.	56-139	8.96	20	L593548-01	WG611310
Toluene	mg/l	0.0241	0.0231	96.5	61-126	4.30	20	L593548-01	WG611310
trans-1,2-Dichloroethene	mg/l	0.0245	0.0224	98.0	45-137	9.02	20	L593548-01	WG611310
trans-1,3-Dichloropropene	mg/l	0.0268	0.0265	107.	59-130	1.08	20	L593548-01	WG611310
Trichloroethene	mg/l	0.0269	0.0255	108.	40-155	5.43	20	L593548-01	WG611310

\* Performance of this Analyte is outside of established criteria.

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





Encana  
Aaron Stacy  
2717 Co. Rd. 215, Ste 100  
Parachute, CO 81635

Quality Assurance Report  
Level II

L593599

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

September 16, 2012

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Trichlorofluoromethane	mg/l	0.0235	0.0219	94.0	35-177	7.04	23	L593548-01	WG611310
Vinyl chloride	mg/l	0.0193	0.0184	77.2	32-159	4.77	21	L593548-01	WG611310
Xylenes, Total	mg/l	0.0852	0.0786	114.	64-133	7.98	20	L593548-01	WG611310
4-Bromofluorobenzene				113.2	82-120				WG611310
Dibromofluoromethane				92.21	82-126				WG611310
Toluene-d8				100.1	92-112				WG611310
Bromide	mg/l	46.1	47.6	92.2	80-120	3.20	20	L593597-01	WG611421
Chloride	mg/l	110.	112.	92.0	80-120	1.80	20	L593597-01	WG611421
Sulfate	mg/l	517.	515.	90.8	80-120	0.388	20	L593597-01	WG611421
TPH (GC/FID) Low Fraction	mg/l	5.63	5.92	102.	55-109	4.98	20	L593663-01	WG611405
a,a,a-Trifluorotoluene(FID)				104.9	62-128				WG611405
Arsenic,Dissolved	mg/l	0.0476	0.0479	82.4	75-125	0.628	20	L592767-01	WG611718
Molybdenum,Dissolved	mg/l	0.0606	0.0592	103.	75-125	2.34	20	L592767-01	WG611718
Potassium,Dissolved	mg/l	13.8	13.6	105.	75-125	1.46	20	L593599-01	WG611671
Fluoride	mg/l	6.48	6.23	97.6	80-120	3.93	20	L593598-01	WG611624
Alkalinity	mg/l	240.	233.	90.0	80-120	2.96	20	L593453-03	WG611833
TOC (Total Organic Carbon)	mg/l	53.8	53.0	104.	80-120	1.52	20	L593502-01	WG611858
Mercury,Dissolved	mg/l	0.00255	0.00252	85.0	70-130	1.18	30	L593600-01	WG611391
Barium,Dissolved	mg/l	1.07	1.07	104.	75-125	0	20	L593221-01	WG612075
Boron,Dissolved	mg/l	1.03	1.03	97.7	75-125	0	20	L593221-01	WG612075
Calcium,Dissolved	mg/l	48.6	48.4	106.	75-125	0.412	20	L593221-01	WG612075
Chromium,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Cobalt,Dissolved	mg/l	1.07	1.08	107.	75-125	0.930	20	L593221-01	WG612075
Copper,Dissolved	mg/l	1.02	1.02	101.	75-125	0	20	L593221-01	WG612075
Iron,Dissolved	mg/l	1.05	1.06	105.	75-125	0.948	20	L593221-01	WG612075
Lithium,Dissolved	mg/l	0.578	0.554	115.	75-125	4.24	20	L593221-01	WG612075
Magnesium,Dissolved	mg/l	20.9	20.9	99.0	75-125	0	20	L593221-01	WG612075
Manganese,Dissolved	mg/l	1.05	1.06	104.	75-125	0.948	20	L593221-01	WG612075
Nickel,Dissolved	mg/l	0.965	0.970	96.5	75-125	0.517	20	L593221-01	WG612075
Potassium,Dissolved	mg/l	11.8	11.6	103.	75-125	1.71	20	L593221-01	WG612075
Silicon,Dissolved	mg/l	3.69	3.68	102.	75-125	0.271	20	L593221-01	WG612075
Sodium,Dissolved	mg/l	16.7	16.2	108.	75-125	3.04	20	L593221-01	WG612075
Strontium,Dissolved	mg/l	1.17	1.15	106.	75-125	1.72	20	L593221-01	WG612075
Vanadium,Dissolved	mg/l	1.01	1.01	101.	75-125	0	20	L593221-01	WG612075
Zinc,Dissolved	mg/l	1.07	1.07	106.	75-125	0	20	L593221-01	WG612075
Antimony,Dissolved	mg/l	0.0529	0.0460	106.	75-125	14.0	20	L593600-01	WG612100
Selenium,Dissolved	mg/l	0.0568	0.0581	104.	75-125	2.26	20	L593600-01	WG612100

\* Performance of this Analyte is outside of established criteria.  
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Tax I.D. 62-0814289

Est. 1970

September 16, 2012

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Batch number /Run number / Sample number cross reference

WG611310: R2333913: L593599-01  
WG611471: R2334493: L593599-01  
WG611421: R2334814: L593599-01  
WG611526: R2336033: L593599-01  
WG611405: R2337235: L593599-01  
WG611718: R2338293: L593599-01  
WG611577: R2339033: L593599-01  
WG611671: R2339193: L593599-01  
WG611624: R2339313: L593599-01  
WG611507: R2339873: L593599-01  
WG611870: R2339874: L593599-01  
WG611833: R2339913: L593599-01  
WG611835: R2339973: L593599-01  
WG611838: R2339993: L593599-01  
WG611581: R2340113: L593599-01  
WG611858: R2340713: L593599-01  
WG611391: R2340917: L593599-01  
WG612075: R2344074: L593599-01  
WG612100: R2347893: L593599-01

\* \* Calculations are performed prior to rounding of reported values.

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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.

**Olsson Associates**  
**826 21 1/2 Road**  
**Grand Junction, CO 80505**

Billing Information:  
 Encana Oil & Gas (USA) Inc.  
 2717 CR. 215 Suite 100  
 Parachute, Co. 81635  
 Attn: Charles Jensen

Report to:  
 Aaron Stacy

Email to:  
 astacy@olssonassociates.com

Analysis/Container/Preservative

Chain of Custody  
 Page 1 of 2



12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859  
 Phone: (615) 758-5858  
 Fax: (615) 758-5859

**E211**

Project Description: **F12 Poly Release** City/State Collected:

Phone: **970-263-7800** Client Project #: **F12 Poly Release** ESC Key: **ENCRCO**

FAX:

Collected by: **Aaron Stacy** Site/Facility ID#: **SCHU1W** P.O.#:

Collected by (signature): *[Signature]* **Rush?** ( Lab MUST Be Notified )  
 \_\_\_\_\_ Same Day.....200%  
 \_\_\_\_\_ Next Day.....100%  
 \_\_\_\_\_ Two Day.....50%  
 \_\_\_\_\_ Three Day.....25%

Date Results Needed:  
 Email? ☐ No ☒ Yes  
 FAX? ☐ No ☐ Yes

Immediately Packed on Ice **N** **Y**

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK / ALKBI / ALKCA	Dissolved Metals	GRO	DRO	RSK175	TOC	V8260	SVOC8270	Remarks/Contaminant	Sample # (lab only)
SCHU1WW-090512	Grab	GW		09/05/12	1000	17	x	x	x	x	x	x	x	x		LS93599-01

\*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other \_\_\_\_\_ pH \_\_\_\_\_ Temp \_\_\_\_\_

Remarks: **METALS 200.7 - Ba, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, V, Zn, Co** **5040 0635 5583**  
**METALS 200.6 - Sb, As, Mo, Se, plus Hg** Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>09/05/12</b>	Time: <b>1515</b>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: <b>JF</b> (lab use only) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: <b>3.8</b>	Bottles Received: <b>17</b>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>9-6-12</b>	Time: <b>0900</b>
				pH Checked: <b>22</b>	NCF:

Billing Information:

Encana Oil & Gas (USA) Inc.  
2717 CR. 215 Suite 100  
Parachute, Co. 81635

Attn: Charles Jensen

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Report to: Aaron Stacy

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Email to: [astacy@olssonassociates.com](mailto:astacy@olssonassociates.com)

[illegible]

Remarks/Contaminant	Sample # (lab only)
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City/State  
Collected

ESC Key: ENCRCO

P.O.#: \_\_\_\_\_

No.	of	Cntr
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1

1000

1593599-6

Flow \_\_\_\_\_ Other \_\_\_\_\_

**NCF:**