

REN # 7181

Page 1

FORM  
4  
Rev 12/05

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 601, Denver, Colorado 80203 Phone: (303)954-2100 Fax: (303)954-2109



## 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).

RECEIVED  
3/4/2013

1. OGCC Operator Number: 100185	4. Contact Name: Chantae Pennell	Complete the Attachment Checklist OGCC
2. Name of Operator: Encana Oil and Gas (USA)	Phone: 970-675-4609	
3. Address: 1125 Escalante Dr City: Rangely State: CO Zip: 81648	Fax: 970-675-4433	
5. API Number 05-103-09704	OGCC Facility ID Number 316068 (Location)	Survey Plat
6. Well/Facility Name: Cathedral Federal #20-11	7. Well/Facility Number 20-11	Directional Survey
8. Location (CtrQtr, Sec, Twp, Rng, Meridian): NESW, Sec 20, 02S, 101W, 6th PM		Surface Equip Diagram
9. County: Rio Blanco	10. Field Name: Cathedral Federal Unit	Technical Info Page
11. Federal, Indian or State Lease Number: 44670		Other NOC <input checked="" type="checkbox"/>

## General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FHL/FSL <input type="checkbox"/> FEU/FAL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> attach directional survey
Bottomhole location CtrQtr, Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Distance to nearest well same formation
	Is location in a High Density Area (rule 603b)? Yes/No: <input type="checkbox"/>
	Surface owner consultation date: _____
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 NUMBER 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/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: 9/26/12
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)	
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested
<input type="checkbox"/> Casing/Cementing Program Change	<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: Chantae Pennell Date: 12/31/12 Email: Chantae.Pennell@Encana.com  
Print Name: Chantae Pennell Title: Environmental Field Coordinator

OGCC Approved: [Signature] Title: EPS # NW Date: 04/23/2013

CONDITIONS OF APPROVAL, IF ANY:

Region

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- |  |                             |
|--|-----------------------------|
| 1. OGCC Operator Number: 100185  | API Number: 05-103-09704    |
| 2. Name of Operator: EnCana Oil and Gas (USA), Inc                             | OGCC Facility ID # 316068   |
| 3. Well/Facility Name: Cathedral Federal #20-11                                | Well/Facility Number: 20-11 |
| 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NESW, Sec 20, 02S, 101W, 6th PM |                             |

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**

See Attached.

# NARRATIVE ATTACHMENT

## FORM 4 (SUNDRY NOTICE)

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### Culvert Pit Closure (CFU 20-11)

Document Date – 10/08/12

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#### Introduction

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 Sundry Notice to request final closure status for the culvert pit associated with the Cathedral Federal Unit #20-11 (COGCC facility #316068, COGCC remediation #7181). The site investigation was conducted by a third party contractor as authorized by Encana personnel, and in accordance with the approved Form 27 previously submitted for this location. All samples were collected in accordance with Encana's Environmental Compliance Group's Sampling Procedures. The analytical results for the respective soil samples are provided in Table 1 and Attachment A of this submittal. The text below provides the details of the site investigation. For a visual description of the site please refer to Figures 1, 2, and 3 – Site Maps.

#### Assessment Activities

July 19, 2012 - The excavated soil surrounding the culvert pit was screened utilizing a photoionization detector (PID) prior to collecting soil samples for laboratory analysis. The culvert pit (steel ring, soil, cement bottom) was carefully removed using a track hoe and placed onsite for later recycling or disposal. It should be noted that there was no liquid associated with the culvert pit during the time of removal. A grab sample was collected directly from the lowest point of the culvert pit after excavation was completed. In addition, four (4) grab samples were collected, one from each excavated sidewall. Approximately 600 cubic yards of excavated material was removed from the pit and laid out in a one (1) foot tall (40' x 90') lift and 470 cubic yards of over-excavated material was stockpiled for evaluation of impacts. The over-excavation was due to elevated PID readings from the sidewall samples. The lift of excavated material was sampled by way of a nine (9) point composite sample. Four (4) background samples were collected from approximately six (6) inches below ground surface (bgs) for analysis with regards to arsenic.

#### Analytical Review

Sample results indicate that soil within the culvert pit footprint on Encana's Cathedral Federal Unit #20-11 well pad, had organic constituent concentrations below or within COGCC Table 910-1 except for Total Volatile and Extractable Petroleum Hydrocarbons (TPH) (1736 ppm) in the excavated material. Analytical results indicate the excavated material exceeded COGCC Table 910-1 allowable concentrations for arsenic (3.2 ppm), sodium adsorption ratio (SAR) (53), and pH (9.2). Though the arsenic concentration in the soil is above the allowable concentration identified in Table 910-1, the concentration is within the range of arsenic background values (1.9 – 4.0 ppm) in this area.

Though the elevated arsenic, SAR, and pH levels of the spoil material from the excavated footprint area is above the allowable levels identified in Table 910-1; it will be buried greater than three feet bgs of existing pad footprint material to assure that material with elevated levels of arsenic, SAR, and pH will have no adverse effect on future re-vegetation efforts and receptors in the area. Please see Table 1 and Attachment A for analytical results.



# NARRATIVE ATTACHMENT

## FORM 4 (SUNDRY NOTICE)

---

### Culvert Pit Closure (CFU 20-11)

Document Date – 10/08/12

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The lift of excavated material that exceeded COGCC Table 910-1 allowable concentration levels for TPH was amended with fertilizer and water. The material was saturated with water and mixed on a weekly basis. On September 26, 2012 the lift of material was sampled by way of a nine (9) point composite sample. Sample results indicate that the lift of excavated material was within or below COGCC Table 910-1 allowable concentration levels. The over-excavated stockpile of material was sampled by way of five (5) point composite sample. Sample results indicate the stockpile of over-excavated material was within or below COGCC Table 910-1 allowable concentration levels.

### Conclusion

Based on the site investigation and analytical results, the excavation and removal of the culvert pit associated with the Cathedral Federal Unit #20-11 is in compliance with the standards specified within COGCC Table 910-1. Encana respectfully requests that final closure be granted for the respective pit, COGCC facility #316068.

### Notification of Completion

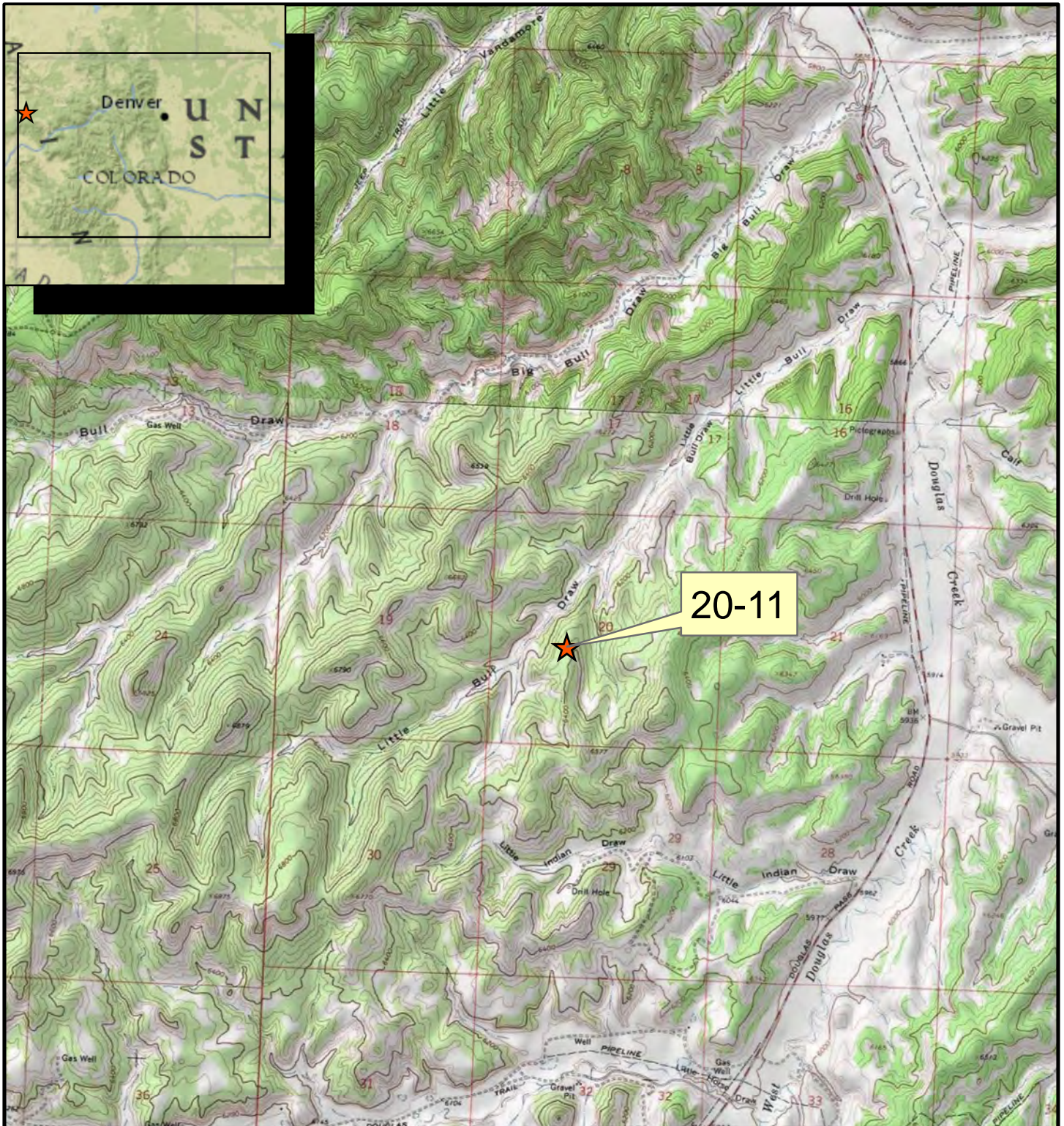
This Sundry Notice is also being submitted as the Notification of Completion for Remediation #7181. If the information provided here is satisfactory, please provide documentation of the closure of this remediation project.

### Attachments

Topographic Location Map (Figure 1)  
20-11 Aerial map with sample locations (Figure 2)  
20-11 Site Diagram of Excavation and sample locations (Figure 3)  
Laboratory Results Summary Table 1 – 20-11 Site Investigation (Table 1)  
Attachment A- Laboratory Reports







## Legend

★ 20-11 Site Location



0 0.25 0.5 1 1.5 Miles

**Rule** Engineering, LLC  
Solutions to Regulations for Industry



**20-11**  
**Site Location Map**

DATE: 10/13/2012 JG FILE: \\Encana\Figures\Rangely\20-11\121013 Site Location Map.pdf

FIGURE: 1





## Legend

★ Soil Sample Location

0 50 100 200 300 Feet



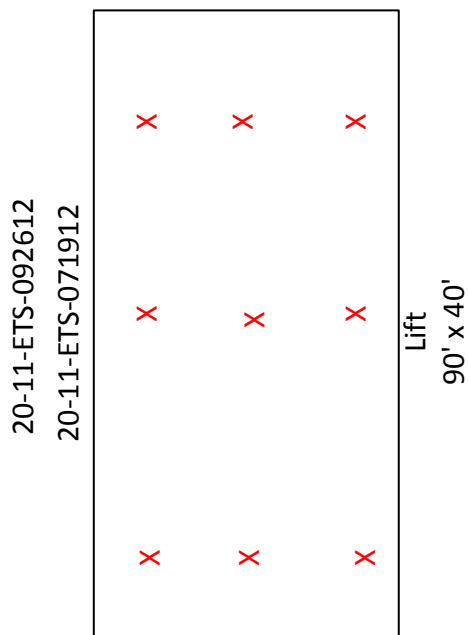
**Rule** Engineering, LLC  
Solutions to Regulations for Industry



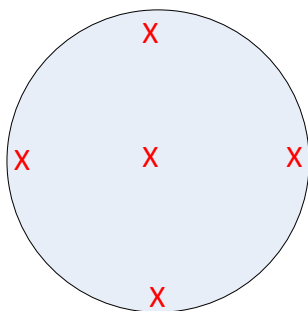
**20-11  
Sample Location Map**

DATE: 10/18/2012 JG FILE: \\EnCana\Figures\Rangely\20-11\121018 Sample Location Map.pdf FIGURE: 2

Direction of  
Flow

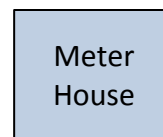
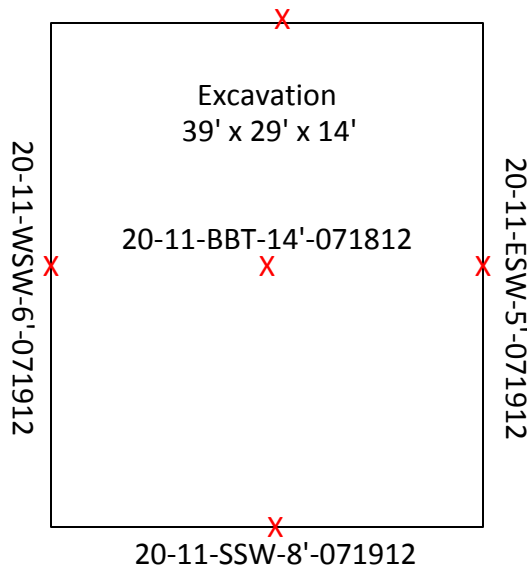


20-11-ETS-SP-092612



Stockpile

20-11-NSW-9'-071912



Legend  
X-Sample



Well: Figure 3. 20-11 Site Diagram

Area: Cathedral Federal Unit

Legal: NESW, Sec 20, 02S, 101W, 6<sup>th</sup> PM

Date: 10/09/12

Drawn By: Shad Johnson

Revision Date:

Scale: None

[illegible]



## **Appendix A**



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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

## Report Summary

Monday August 06, 2012

Report Number: L586506


Samples Received: 07/24/12

Client Project: 20-11

Description: 20-11-Site Clearance

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:

  
Jarred 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.

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.



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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-NSW-9 FT-071912  
Collected By : SRM  
Collection Date : 07/19/12 13:10

ESC Sample # : L586506-01

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.2		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	96.3		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/26/12	1
Surrogate recovery(%)						
o-Terphenyl	61.2		% Rec.	3546/DRO	07/26/12	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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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-ESW-5 FT-071912  
Collected By : SRM  
Collection Date : 07/19/12 13:20

ESC Sample # : L586506-02

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.8		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	96.8		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/25/12	1
Surrogate recovery(%)						
o-Terphenyl	54.4		% Rec.	3546/DRO	07/25/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-SSW-8 FT-071912  
Collected By : SRM  
Collection Date : 07/19/12 09:45

ESC Sample # : L586506-03

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	90.8		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	95.6		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	9.0	4.0	mg/kg	3546/DRO	07/26/12	1
Surrogate recovery(%)						
o-Terphenyl	53.7		% Rec.	3546/DRO	07/26/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance

ESC Sample # : L586506-04

Sample ID : 20-11-WSW-6 FT-071912

Site ID : 20-11

Collected By : SRM  
Collection Date : 07/19/12 13:00

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.2		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	96.0		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	10.	4.0	mg/kg	3546/DRO	07/26/12	1
Surrogate recovery(%)						
o-Terphenyl	55.2		% Rec.	3546/DRO	07/26/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-BBT-14 FT-071812  
Collected By : SRM  
Collection Date : 07/18/12 14:30

ESC Sample # : L586506-05

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.0		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	95.9		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	13.	4.0	mg/kg	3546/DRO	07/26/12	1
Surrogate recovery(%)						
o-Terphenyl	60.5		% Rec.	3546/DRO	07/26/12	1

BDL - Below Detection Limit

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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-ETS-071912  
Collected By : SRM  
Collection Date : 07/19/12 13:30

ESC Sample # : L586506-06

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	07/30/12	1
Chromium, Trivalent	9.0	2.0	mg/kg	Calc.	07/26/12	1
ORP	92.		mV	2580	07/25/12	1
pH	9.2		su	9045D	07/26/12	1
Sodium Adsorption Ratio	53.			Calc.	07/28/12	1
Specific Conductance	4500		umhos/cm	9050AMod	07/30/12	1
Mercury	0.044	0.020	mg/kg	7471	07/26/12	1
Arsenic	3.2	1.0	mg/kg	6010B	07/26/12	1
Barium	580	0.25	mg/kg	6010B	07/26/12	1
Cadmium	0.28	0.25	mg/kg	6010B	07/26/12	1
Calcium	4300	25.	mg/kg	6010B	07/26/12	1
Chromium	9.0	0.50	mg/kg	6010B	07/26/12	1
Copper	22.	1.0	mg/kg	6010B	07/26/12	1
Lead	16.	0.25	mg/kg	6010B	07/26/12	1
Magnesium	2400	5.0	mg/kg	6010B	07/26/12	1
Nickel	12.	1.0	mg/kg	6010B	07/26/12	1
Selenium	BDL	5.0	mg/kg	6010B	07/26/12	5
Silver	BDL	0.50	mg/kg	6010B	07/26/12	1
Sodium	2100	25.	mg/kg	6010B	07/26/12	1
Zinc	840	1.5	mg/kg	6010B	07/26/12	1
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	0.074	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	0.28	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	36.	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	90.8		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	96.2		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	1700	80.	mg/kg	3546/DRO	07/26/12	20
Surrogate recovery(%)						
o-Terphenyl	201.		% Rec.	3546/DRO	07/26/12	20
Polynuclear Aromatic Hydrocarbons						
Anthracene	0.068	0.060	mg/kg	8270C-SIM	07/25/12	10
Acenaphthene	0.18	0.060	mg/kg	8270C-SIM	07/25/12	10

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
L586506-06 (PH) - 9.2@20.6c  
L586506-06 (SV8270PAHSIM) - Dilution due to matrix



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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
  
Sample ID : 20-11-ETS-071912  
  
Collected By : SRM  
Collection Date : 07/19/12 13:30

ESC Sample # : L586506-06  
  
Site ID : 20-11  
  
Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Fluorene	0.24	0.060	mg/kg	8270C-SIM	07/25/12	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Naphthalene	0.60	0.15	mg/kg	8270C-SIM	07/26/12	25
Phenanthrene	0.38	0.060	mg/kg	8270C-SIM	07/25/12	10
Pyrene	0.077	0.060	mg/kg	8270C-SIM	07/25/12	10
1-Methylnaphthalene	1.7	0.15	mg/kg	8270C-SIM	07/26/12	25
2-Methylnaphthalene	2.2	0.15	mg/kg	8270C-SIM	07/26/12	25
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	07/25/12	10
Surrogate Recovery						
Nitrobenzene-d5	5520		% Rec.	8270C-SIM	07/26/12	25
2-Fluorobiphenyl	87.1		% Rec.	8270C-SIM	07/25/12	10
p-Terphenyl-d14	137.		% Rec.	8270C-SIM	07/25/12	10

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
Note:  
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Reported: 08/05/12 17:13 Revised: 08/06/12 11:18  
L586506-06 (PH) - 9.2@20.6c  
L586506-06 (SV8270PAHSIM) - Dilution due to matrix





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# REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-NSW-6 FT-071912  
Collected By : SRM  
Collection Date : 07/19/12 14:00

ESC Sample # : L586506-07

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	07/25/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	07/25/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	07/25/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	07/25/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	91.4		% Rec.	8021/8015	07/25/12	5
a,a,a-Trifluorotoluene(PID)	96.4		% Rec.	8021/8015	07/25/12	5
TPH (GC/FID) High Fraction	BDL	4.0	mg/kg	3546/DRO	07/26/12	1
Surrogate recovery(%)						
o-Terphenyl	49.6		% Rec.	3546/DRO	07/26/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-BG1N-6IN-071812  
Collected By : SRM  
Collection Date : 07/19/12 12:10

ESC Sample # : L586506-08

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.0	1.0	mg/kg	6010B	08/02/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-BG2E-6IN-071812  
Collected By : SRM  
Collection Date : 07/19/12 12:20

ESC Sample # : L586506-09  
  
Site ID : 20-11  
Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	2.7	1.0	mg/kg	6010B	08/02/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
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REPORT OF ANALYSIS

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-BG3S-6IN-071812  
Collected By : SRM  
Collection Date : 07/19/12 12:30

ESC Sample # : L586506-10  
Site ID : 20-11  
Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	1.9	1.0	mg/kg	6010B	08/02/12	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)  
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# REPORT OF ANALYSIS

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EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

August 06, 2012

Date Received : July 24, 2012  
Description : 20-11-Site Clearance  
Sample ID : 20-11-BG4W-6IN-071812  
Collected By : SRM  
Collection Date : 07/19/12 12:40

ESC Sample # : L586506-11

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.0	1.0	mg/kg	6010B	08/02/12	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
L586506-06	WG604370	SAMP	Selenium	R2274194	O
	WG604280	SAMP	Nitrobenzene-d5	R2273275	J7
	WG604353	SAMP	o-Terphenyl	R2274873	J7

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
0	(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.

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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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzene	< .0005	mg/kg			WG604226	07/24/12 19:17
Ethylbenzene	< .0005	mg/kg			WG604226	07/24/12 19:17
Toluene	< .005	mg/kg			WG604226	07/24/12 19:17
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG604226	07/24/12 19:17
Total Xylene	< .0015	mg/kg			WG604226	07/24/12 19:17
a,a,a-Trifluorotoluene(FID)		% Rec.	91.55	59-128	WG604226	07/24/12 19:17
a,a,a-Trifluorotoluene(PID)		% Rec.	96.63	54-144	WG604226	07/24/12 19:17
1-Methylnaphthalene	< .006	mg/kg			WG604280	07/25/12 01:54
2-Chloronaphthalene	< .006	mg/kg			WG604280	07/25/12 01:54
2-Methylnaphthalene	< .006	mg/kg			WG604280	07/25/12 01:54
Acenaphthene	< .006	mg/kg			WG604280	07/25/12 01:54
Acenaphthylene	< .006	mg/kg			WG604280	07/25/12 01:54
Anthracene	< .006	mg/kg			WG604280	07/25/12 01:54
Benzo(a)anthracene	< .006	mg/kg			WG604280	07/25/12 01:54
Benzo(a)pyrene	< .006	mg/kg			WG604280	07/25/12 01:54
Benzo(b)fluoranthene	< .006	mg/kg			WG604280	07/25/12 01:54
Benzo(g,h,i)perylene	< .006	mg/kg			WG604280	07/25/12 01:54
Benzo(k)fluoranthene	< .006	mg/kg			WG604280	07/25/12 01:54
Chrysene	< .006	mg/kg			WG604280	07/25/12 01:54
Dibenz(a,h)anthracene	< .006	mg/kg			WG604280	07/25/12 01:54
Fluoranthene	< .006	mg/kg			WG604280	07/25/12 01:54
Fluorene	< .006	mg/kg			WG604280	07/25/12 01:54
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG604280	07/25/12 01:54
Naphthalene	< .006	mg/kg			WG604280	07/25/12 01:54
Phenanthrene	< .006	mg/kg			WG604280	07/25/12 01:54
Pyrene	< .006	mg/kg			WG604280	07/25/12 01:54
2-Fluorobiphenyl		% Rec.	63.64	34-129	WG604280	07/25/12 01:54
Nitrobenzene-d5		% Rec.	58.52	14-141	WG604280	07/25/12 01:54
p-Terphenyl-d14		% Rec.	69.20	25-139	WG604280	07/25/12 01:54
Mercury	< .02	mg/kg			WG604443	07/26/12 10:25
TPH (GC/FID) High Fraction	< 4	ppm			WG604272	07/25/12 22:08
o-Terphenyl		% Rec.	63.45	50-150	WG604272	07/25/12 22:08
pH	5.64	su			WG604563	07/26/12 11:49
Arsenic	< 1	mg/kg			WG604370	07/26/12 10:29
Barium	< .25	mg/kg			WG604370	07/26/12 10:29
Cadmium	< .25	mg/kg			WG604370	07/26/12 10:29
Calcium	< 25	mg/kg			WG604370	07/26/12 10:29
Chromium	< .5	mg/kg			WG604370	07/26/12 10:29
Copper	< 1	mg/kg			WG604370	07/26/12 10:29
Lead	< .25	mg/kg			WG604370	07/26/12 10:29
Magnesium	< 5	mg/kg			WG604370	07/26/12 10:29
Nickel	< 1	mg/kg			WG604370	07/26/12 10:29
Selenium	< 1	mg/kg			WG604370	07/26/12 10:29
Silver	< .5	mg/kg			WG604370	07/26/12 10:29
Sodium	< 25	mg/kg			WG604370	07/26/12 10:29
Zinc	< 1.5	mg/kg			WG604370	07/26/12 10:29
TPH (GC/FID) High Fraction	< 4	ppm			WG604353	07/26/12 14:18

\* 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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August 06, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
o-Terphenyl		% Rec.	62.97	50-150		07/26/12 14:18
Specific Conductance	1.85	umhos/cm			WG605007	07/30/12 15:39
Chromium,Hexavalent	< 2	mg/kg			WG604782	07/30/12 14:54
Arsenic	< 1	mg/kg			WG605113	08/02/12 14:00

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
ORP	mV	190.	200.	3.05	20	L585900-13	WG604456
ORP	mV	120.	120.	4.08	20	L586623-01	WG604456
Mercury	mg/kg	0.0220	0.0200	7.23	20	L586608-08	WG604443
pH	su	12.0	12.0	4.08*	1	L586416-01	WG604563
pH	su	6.40	6.40	0.313	1	L586772-01	WG604563
Arsenic	mg/kg	15.0	13.0	13.6	20	L584954-05	WG604370
Barium	mg/kg	150.	170.	9.88	20	L584954-05	WG604370
Calcium	mg/kg	35000	46900	29.1*	20	L584954-05	WG604370
Chromium	mg/kg	15.0	8.70	51.3*	20	L584954-05	WG604370
Copper	mg/kg	23.0	208.	161.*	20	L584954-05	WG604370
Lead	mg/kg	24.0	23.0	6.32	20	L584954-05	WG604370
Magnesium	mg/kg	7300	9460	25.5*	20	L584954-05	WG604370
Nickel	mg/kg	12.0	12.0	0.837	20	L584954-05	WG604370
Silver	mg/kg	0	0	0	20	L584954-05	WG604370
Sodium	mg/kg	250.	352.	35.1*	20	L584954-05	WG604370
Zinc	mg/kg	45.0	66.0	37.8*	20	L584954-05	WG604370
Cadmium	mg/kg	0	0	0	20	L584954-05	WG604370
Selenium	mg/kg	0	0	0	20	L584954-05	WG604370
Specific Conductance	umhos/cm	2700	2600	2.66	20	L586499-06	WG605007
Specific Conductance	umhos/cm	1200	1100	5.31	20	L586821-05	WG605007
Chromium,Hexavalent	mg/kg	0	0	0	20	L586803-01	WG604782
Chromium,Hexavalent	mg/kg	0	0	0	20	L586804-01	WG604782
Arsenic	mg/kg	7.30	6.80	6.82	20	L585652-08	WG605113

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0464	92.9	76-113	WG604226
Ethylbenzene	mg/kg	.05	0.0472	94.5	78-115	WG604226
Toluene	mg/kg	.05	0.0461	92.2	76-114	WG604226
Total Xylene	mg/kg	.15	0.138	92.3	81-118	WG604226
a,a,a-Trifluorotoluene(PID)				95.76	54-144	WG604226
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.67	121.	67-135	WG604226
a,a,a-Trifluorotoluene(FID)				93.97	59-128	WG604226

\* 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	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
ORP	mV	228	226.	99.1	95.6-104.	WG604456
1-Methylnaphthalene	mg/kg	.033	0.0226	68.5	48-113	WG604280
2-Chloronaphthalene	mg/kg	.033	0.0234	70.8	51-114	WG604280
2-Methylnaphthalene	mg/kg	.033	0.0219	66.4	44-109	WG604280
Acenaphthene	mg/kg	.033	0.0251	76.1	52-108	WG604280
Acenaphthylene	mg/kg	.033	0.0246	74.5	51-110	WG604280
Anthracene	mg/kg	.033	0.0249	75.6	58-120	WG604280
Benzo(a)anthracene	mg/kg	.033	0.0266	80.6	54-110	WG604280
Benzo(a)pyrene	mg/kg	.033	0.0243	73.6	56-118	WG604280
Benzo(b)fluoranthene	mg/kg	.033	0.0250	75.8	55-114	WG604280
Benzo(g,h,i)perylene	mg/kg	.033	0.0237	71.8	48-130	WG604280
Benzo(k)fluoranthene	mg/kg	.033	0.0251	76.2	55-122	WG604280
Chrysene	mg/kg	.033	0.0247	74.9	57-118	WG604280
Dibenz(a,h)anthracene	mg/kg	.033	0.0238	72.0	53-122	WG604280
Fluoranthene	mg/kg	.033	0.0246	74.5	58-118	WG604280
Fluorene	mg/kg	.033	0.0239	72.3	54-109	WG604280
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0237	71.9	51-125	WG604280
Naphthalene	mg/kg	.033	0.0218	66.1	45-105	WG604280
Phenanthrene	mg/kg	.033	0.0238	72.2	53-114	WG604280
Pyrene	mg/kg	.033	0.0268	81.3	53-121	WG604280
2-Fluorobiphenyl				72.85	34-129	WG604280
Nitrobenzene-d5				65.24	14-141	WG604280
p-Terphenyl-d14				78.57	25-139	WG604280
Mercury	mg/kg	12.4	12.9	104.	71.6-128	WG604443
TPH (GC/FID) High Fraction	ppm	60	46.8	78.0	50-150	WG604272
o-Terphenyl				65.95	50-150	WG604272
pH	su	5.7	5.75	101.	98-101	WG604563
TPH (GC/FID) High Fraction	ppm	60	39.1	65.1	50-150	WG604353
o-Terphenyl				59.16	50-150	WG604353
Specific Conductance	umhos/cm	495	505.	102.	85-115	WG605007
Chromium, Hexavalent	mg/kg	150	136.	90.7	50-150	WG604782
Arsenic	mg/kg	237	223.	94.1	83.1-117	WG605113

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0464	0.0464	93.0	76-113	0.0300	20	WG604226
Ethylbenzene	mg/kg	0.0472	0.0472	94.0	78-115	0.0800	20	WG604226
Toluene	mg/kg	0.0459	0.0461	92.0	76-114	0.490	20	WG604226
Total Xylene	mg/kg	0.138	0.138	92.0	81-118	0.300	20	WG604226
a,a,a-Trifluorotoluene(PID)				95.92	54-144			WG604226
TPH (GC/FID) Low Fraction	mg/kg	6.71	6.67	122.	67-135	0.530	20	WG604226

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

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Quality Assurance Report  
Level II

L586506

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Est. 1970

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
a,a,a-Trifluorotoluene(FID)				93.95	59-128			
ORP	mV	225.	226.	99.0	95.6-104.	0.443	20	WG604456
1-Methylnaphthalene	mg/kg	0.0232	0.0226	70.0	48-113	2.71	24	WG604280
2-Chloronaphthalene	mg/kg	0.0241	0.0234	73.0	51-114	3.24	24	WG604280
2-Methylnaphthalene	mg/kg	0.0221	0.0219	67.0	44-109	1.12	24	WG604280
Acenaphthene	mg/kg	0.0250	0.0251	76.0	52-108	0.543	22	WG604280
Acenaphthylene	mg/kg	0.0248	0.0246	75.0	51-110	0.955	21	WG604280
Anthracene	mg/kg	0.0261	0.0249	79.0	58-120	4.47	20	WG604280
Benzo(a)anthracene	mg/kg	0.0285	0.0266	86.0	54-110	7.01	22	WG604280
Benzo(a)pyrene	mg/kg	0.0258	0.0243	78.0	56-118	6.25	21	WG604280
Benzo(b)fluoranthene	mg/kg	0.0271	0.0250	82.0	55-114	8.02	20	WG604280
Benzo(g,h,i)perylene	mg/kg	0.0257	0.0237	78.0	48-130	7.97	20	WG604280
Benzo(k)fluoranthene	mg/kg	0.0258	0.0251	78.0	55-122	2.64	25	WG604280
Chrysene	mg/kg	0.0268	0.0247	81.0	57-118	8.02	20	WG604280
Dibenz(a,h)anthracene	mg/kg	0.0259	0.0238	78.0	53-122	8.51	20	WG604280
Fluoranthene	mg/kg	0.0267	0.0246	81.0	58-118	8.46	20	WG604280
Fluorene	mg/kg	0.0249	0.0239	75.0	54-109	4.24	20	WG604280
Indeno(1,2,3-cd)pyrene	mg/kg	0.0256	0.0237	78.0	51-125	7.57	21	WG604280
Naphthalene	mg/kg	0.0224	0.0218	68.0	45-105	2.59	24	WG604280
Phenanthrene	mg/kg	0.0241	0.0238	73.0	53-114	1.24	20	WG604280
Pyrene	mg/kg	0.0283	0.0268	86.0	53-121	5.23	20	WG604280
2-Fluorobiphenyl				69.84	34-129			WG604280
Nitrobenzene-d5				62.81	14-141			WG604280
p-Terphenyl-d14				77.67	25-139			WG604280
TPH (GC/FID) High Fraction	ppm	44.7	46.8	74.0	50-150	4.56	25	WG604272
o-Terphenyl				61.72	50-150			WG604272
pH	su	5.72	5.75	100.	98-101	0.523	20	WG604563
TPH (GC/FID) High Fraction	ppm	39.1	39.1	65.0	50-150	0.165	25	WG604353
o-Terphenyl				59.42	50-150			WG604353
Specific Conductance	umhos/	502.	505.	101.	85-115	0.596	20	WG605007
Chromium,Hexavalent	mg/kg	130.	136.	87.0	50-150	4.51	20	WG604782

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.230	0	.05	92.0	32-137	L586499-04	WG604226
Ethylbenzene	mg/kg	0.240	0	.05	96.1	10-150	L586499-04	WG604226
Toluene	mg/kg	0.229	0	.05	91.7	20-142	L586499-04	WG604226
Total Xylene	mg/kg	0.688	0	.15	91.7	16-141	L586499-04	WG604226
a,a,a-Trifluorotoluene(PID)					96.25	54-144		WG604226
TPH (GC/FID) Low Fraction	mg/kg	27.3	0	5.5	99.2	55-109	L586499-04	WG604226
a,a,a-Trifluorotoluene(FID)					92.85	59-128		WG604226
Mercury	mg/kg	0.260	0.0200	.25	96.0	80-120	L586608-08	WG604443

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Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
TPH (GC/FID) High Fraction	ppm	48.6	0	60	80.9	50-150	L586496-05	WG604272
o-Terphenyl					64.94	50-150		WG604272
Arsenic	mg/kg	60.2	13.0	50	94.4	75-125	L584954-05	WG604370
Barium	mg/kg	193.	170.	50	46.0*	75-125	L584954-05	WG604370
Calcium	mg/kg	20100	46900	500	0*	75-125	L584954-05	WG604370
Chromium	mg/kg	61.9	8.70	50	106.	75-125	L584954-05	WG604370
Copper	mg/kg	68.0	208.	50	0*	75-125	L584954-05	WG604370
Lead	mg/kg	71.1	23.0	50	96.2	75-125	L584954-05	WG604370
Magnesium	mg/kg	4990	9460	500	0*	75-125	L584954-05	WG604370
Nickel	mg/kg	55.9	12.0	50	87.8	75-125	L584954-05	WG604370
Silver	mg/kg	47.0	0	50	94.0	75-125	L584954-05	WG604370
Sodium	mg/kg	632.	352.	500	56.0*	75-125	L584954-05	WG604370
Zinc	mg/kg	119.	66.0	50	106.	75-125	L584954-05	WG604370
Cadmium	mg/kg	46.9	0	50	93.8	75-125	L586572-01	WG604370
Lead	mg/kg	49.1	0	50	98.2	75-125	L586572-01	WG604370
Silver	mg/kg	51.5	3.20	50	96.6	75-125	L586572-01	WG604370
Arsenic	mg/kg	53.2	8.00	50	90.4	75-125	L586608-08	WG604370
Barium	mg/kg	283.	190.	50	186.*	75-125	L586608-08	WG604370
Cadmium	mg/kg	44.9	0	50	89.8	75-125	L586608-08	WG604370
Chromium	mg/kg	69.0	22.0	50	94.0	75-125	L586608-08	WG604370
Lead	mg/kg	64.3	18.0	50	92.6	75-125	L586608-08	WG604370
Silver	mg/kg	45.3	0	50	90.6	75-125	L586608-08	WG604370
Selenium	mg/kg	41.3	0	50	82.6	75-125	L586608-08	WG604370
Cadmium	mg/kg	52.8	0	50	106.	75-125	L584954-05	WG604370
Selenium	mg/kg	43.9	0	50	87.8	75-125	L584954-05	WG604370
Barium	mg/kg	78.9	33.0	50	91.8	75-125	L586572-01	WG604370
Chromium	mg/kg	55.8	8.60	50	94.4	75-125	L586572-01	WG604370
Selenium	mg/kg	45.3	0	50	90.6	75-125	L586572-01	WG604370
TPH (GC/FID) High Fraction	ppm	37.2	1.50	60	59.5	50-150	L586608-04	WG604353
o-Terphenyl					53.38	50-150		WG604353
1-Methylnaphthalene	mg/kg	0.0278	0	.033	84.2	25-155	L586498-06	WG604280
2-Chloronaphthalene	mg/kg	0.0260	0	.033	78.8	31-153	L586498-06	WG604280
2-Methylnaphthalene	mg/kg	0.0291	0	.033	88.1	22-172	L586498-06	WG604280
Acenaphthene	mg/kg	0.0275	0	.033	83.5	43-133	L586498-06	WG604280
Acenaphthylene	mg/kg	0.0304	0	.033	92.1	42-146	L586498-06	WG604280
Anthracene	mg/kg	0.0294	0	.033	89.0	38-153	L586498-06	WG604280
Benzo(a)anthracene	mg/kg	0.0337	0	.033	102.	31-142	L586498-06	WG604280
Benzo(a)pyrene	mg/kg	0.0339	0	.033	103.	26-152	L586498-06	WG604280
Benzo(b)fluoranthene	mg/kg	0.0366	0	.033	111.	10-188	L586498-06	WG604280
Benzo(g,h,i)perylene	mg/kg	0.0336	0	.033	102.	10-176	L586498-06	WG604280
Benzo(k)fluoranthene	mg/kg	0.0326	0	.033	98.6	22-163	L586498-06	WG604280
Chrysene	mg/kg	0.0327	0	.033	99.0	26-146	L586498-06	WG604280
Dibenz(a,h)anthracene	mg/kg	0.0304	0	.033	92.0	10-160	L586498-06	WG604280
Fluoranthene	mg/kg	0.0350	0	.033	106.	23-160	L586498-06	WG604280
Fluorene	mg/kg	0.0280	0	.033	84.8	44-143	L586498-06	WG604280
Indeno(1,2,3-cd)pyrene	mg/kg	0.0342	0	.033	104.	10-157	L586498-06	WG604280
Naphthalene	mg/kg	0.0268	0	.033	81.2	22-156	L586498-06	WG604280
Phenanthrene	mg/kg	0.0291	0	.033	88.0	23-164	L586498-06	WG604280
Pyrene	mg/kg	0.0374	0	.033	113.	12-170	L586498-06	WG604280
2-Fluorobiphenyl					74.53	34-129		WG604280
Nitrobenzene-d5					67.55	14-141		WG604280
p-Terphenyl-d14					75.44	25-139		WG604280

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch	
			Ref Res	TV					
Chromium,Hexavalent	mg/kg	13.6	0	20	68.0	50-150	L586804-01	WG604782	
Arsenic	mg/kg	54.5	6.80	50	95.4	75-125	L585652-08	WG605113	
Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.221	0.230	88.4	32-137	3.98	39	L586499-04	WG604226
Ethylbenzene	mg/kg	0.220	0.240	88.1	10-150	8.67	44	L586499-04	WG604226
Toluene	mg/kg	0.216	0.229	86.4	20-142	6.02	42	L586499-04	WG604226
Total Xylene	mg/kg	0.642	0.688	85.6	16-141	6.84	46	L586499-04	WG604226
a,a,a-Trifluorotoluene(PID)				95.44	54-144				WG604226
TPH (GC/FID) Low Fraction	mg/kg	28.6	27.3	104.	55-109	4.72	20	L586499-04	WG604226
a,a,a-Trifluorotoluene(FID)				92.78	59-128				WG604226
Mercury	mg/kg	0.254	0.260	93.6	80-120	2.33	20	L586608-08	WG604443
TPH (GC/FID) High Fraction	ppm	48.2	48.6	80.3	50-150	0.760	25	L586496-05	WG604272
o-Terphenyl				67.67	50-150				WG604272
Arsenic	mg/kg	60.9	60.2	95.8	75-125	1.16	20	L584954-05	WG604370
Barium	mg/kg	172.	193.	4.00*	75-125	11.5	20	L584954-05	WG604370
Calcium	mg/kg	16400	20100	0*	75-125	20.3*	20	L584954-05	WG604370
Chromium	mg/kg	62.1	61.9	107.	75-125	0.323	20	L584954-05	WG604370
Copper	mg/kg	70.2	68.0	0*	75-125	3.18	20	L584954-05	WG604370
Lead	mg/kg	70.1	71.1	94.2	75-125	1.42	20	L584954-05	WG604370
Magnesium	mg/kg	4230	4990	0*	75-125	16.5	20	L584954-05	WG604370
Nickel	mg/kg	57.8	55.9	91.6	75-125	3.34	20	L584954-05	WG604370
Silver	mg/kg	46.1	47.0	92.2	75-125	1.93	20	L584954-05	WG604370
Sodium	mg/kg	625.	632.	54.6*	75-125	1.11	20	L584954-05	WG604370
Zinc	mg/kg	93.8	119.	55.6*	75-125	23.7*	20	L584954-05	WG604370
Cadmium	mg/kg	45.5	46.9	91.0	75-125	3.03	20	L586572-01	WG604370
Lead	mg/kg	47.5	49.1	95.0	75-125	3.31	20	L586572-01	WG604370
Silver	mg/kg	50.4	51.5	94.4	75-125	2.16	20	L586572-01	WG604370
Arsenic	mg/kg	55.5	53.2	95.0	75-125	4.23	20	L586608-08	WG604370
Barium	mg/kg	324.	283.	268.*	75-125	13.5	20	L586608-08	WG604370
Cadmium	mg/kg	45.8	44.9	91.6	75-125	1.98	20	L586608-08	WG604370
Chromium	mg/kg	71.6	69.0	99.2	75-125	3.70	20	L586608-08	WG604370
Lead	mg/kg	71.7	64.3	107.	75-125	10.9	20	L586608-08	WG604370
Silver	mg/kg	46.4	45.3	92.8	75-125	2.40	20	L586608-08	WG604370
Selenium	mg/kg	41.2	41.3	82.4	75-125	0.242	20	L586608-08	WG604370
Cadmium	mg/kg	50.0	52.8	100.	75-125	5.45	20	L584954-05	WG604370
Selenium	mg/kg	42.5	41.3	85.0	75-125	2.86	20	L586608-08	WG604370
Barium	mg/kg	78.3	78.9	90.6	75-125	0.763	20	L586572-01	WG604370
Chromium	mg/kg	56.7	55.8	96.2	75-125	1.60	20	L586572-01	WG604370
Selenium	mg/kg	45.9	45.3	18.4*	75-125	1.32	20	L586572-01	WG604370
TPH (GC/FID) High Fraction	ppm	39.1	37.2	62.6	50-150	4.81	25	L586608-04	WG604353
o-Terphenyl				54.88	50-150				WG604353
1-Methylnaphthalene	mg/kg	0.0255	0.0278	77.3	25-155	8.52	27	L586498-06	WG604280
2-Chloronaphthalene	mg/kg	0.0262	0.0260	79.4	31-153	0.719	22	L586498-06	WG604280
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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
2-Methylnaphthalene	mg/kg	0.0270	0.0291	81.7	22-172	7.52	29	L586498-06	WG604280	
Acenaphthene	mg/kg	0.0273	0.0275	82.6	43-133	1.01	26	L586498-06	WG604280	
Acenaphthylene	mg/kg	0.0283	0.0304	85.7	42-146	7.18	22	L586498-06	WG604280	
Anthracene	mg/kg	0.0280	0.0294	84.7	38-153	4.87	27	L586498-06	WG604280	
Benzo(a)anthracene	mg/kg	0.0340	0.0337	103.	31-142	0.965	31	L586498-06	WG604280	
Benzo(a)pyrene	mg/kg	0.0340	0.0339	103.	26-152	0.312	32	L586498-06	WG604280	
Benzo(b)fluoranthene	mg/kg	0.0360	0.0366	109.	10-188	1.51	33	L586498-06	WG604280	
Benzo(g,h,i)perylene	mg/kg	0.0293	0.0336	88.9	10-176	13.6	30	L586498-06	WG604280	
Benzo(k)fluoranthene	mg/kg	0.0308	0.0326	93.4	22-163	5.46	29	L586498-06	WG604280	
Chrysene	mg/kg	0.0307	0.0327	93.0	26-146	6.19	30	L586498-06	WG604280	
Dibenz(a,h)anthracene	mg/kg	0.0271	0.0304	82.0	10-160	11.5	39	L586498-06	WG604280	
Fluoranthene	mg/kg	0.0317	0.0350	96.0	23-160	9.98	22	L586498-06	WG604280	
Fluorene	mg/kg	0.0287	0.0280	87.0	44-143	2.57	23	L586498-06	WG604280	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0306	0.0342	92.8	10-157	11.0	40	L586498-06	WG604280	
Naphthalene	mg/kg	0.0266	0.0268	80.7	22-156	0.584	27	L586498-06	WG604280	
Phenanthrene	mg/kg	0.0273	0.0291	82.9	23-164	6.05	25	L586498-06	WG604280	
Pyrene	mg/kg	0.0291	0.0374	88.2	12-170	25.1*	24	L586498-06	WG604280	
2-Fluorobiphenyl				78.37	34-129				WG604280	
Nitrobenzene-d5				68.45	14-141				WG604280	
p-Terphenyl-d14				63.72	25-139				WG604280	
Chromium, Hexavalent	mg/kg	13.0	13.6	65.0	50-150	4.51	20	L586804-01	WG604782	
Arsenic	mg/kg	56.0	54.5	98.4	75-125	2.71	20	L585652-08	WG605113	

Batch number / Run number / Sample number cross reference

WG604226: R2271793: L586506-01 02 03 04 05 06 07  
WG604456: R2272893: L586506-06  
WG604280: R2273275: L586506-06  
WG604443: R2273417: L586506-06  
WG604272: R2273537: L586506-01 02 03 04 05  
WG604563: R2273696: L586506-06  
WG604370: R2274194: L586506-06  
WG604353: R2274873: L586506-06 07  
WG604744: R2277754: L586506-06  
WG605007: R2278874: L586506-06  
WG604782: R2279493: L586506-06  
WG605113: R2286774: L586506-08 09 10 11

\* \* Calculations are performed prior to rounding of reported values.  
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Est. 1970

August 06, 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.

**Encana Oil & Gas**  
**1125 Escalante Drive**  
**Rangely, CO 81648-3600**  
**\*ENCANRCO\***

**Billing Information:**

Blake Ford  
 1125 Escalante Drive  
 Rangely, CO 81648-3600  
 (970) 675-4414

Report to:

Blake Ford

Email to:

blake.ford@encana.com

**Analysis/Container/Preservative**

BTEXGRO / DRO - 8021/8015

SV8270PAHSIM - 8270SIM

SPCON - 9050AMod

SAR - Calc.

RCRA8 Metals + Cu, Ni, and Zn - 6010/7470

CR6SS - 3060A/7196 ,CR3 - Calc.

As

Chain of Custody  
 Page 1 of 2

07-0054  
 D101

L-A-B S-C-I-E-N-C-E-S

12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone: (800) 767-5859

Phone: (615) 758-5858

Fax: (615) 758-5859

Project Description: 20-11-Site Clearance

City/State Collected: Rangely, Co

Phone: (970) 675-4414  
 FAX:

Client Project #: 20-11

ESC Key: ENCANRCO

Collected by: SRM

Site/Facility ID#: 20-11

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

Immediately Packed on Ice N ☒ Y

CoCode ENCANRCO (lab use only)

Template/Prelogin

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	BTEXGRO / DRO - 8021/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 6010/7470	CR6SS - 3060A/7196 ,CR3 - Calc.	As	Remarks/Contaminant	Sample # (lab only)
20-11-BG1N-6"-071812	Grab	SS	6"	7/18/12	1210	1								PLEASE HOLD	1586586
20-11-BG2E-6"-071812	Grab	SS	6"	7/18/12	1220	1									
20-11-BG3S-6"-071812	Grab	SS	6"	7/18/12	1230	1									
20-11-BG4W-6"-071812	Grab	SS	6"	7/18/12	1240	1									
20-11-NSW-9'-071912	Grab	SS	9'	7/19/12	1310	1	X								01
20-11-ESW-5'-071912	Grab	SS	5'	7/19/12	1320	1	X								02
22-15-SSW-8'-071912	Grab	SS	8'	7/19/12	0945	1	X								03
20-11-WSW-6'-071912	Grab	SS	6'	7/19/12	1300	1	X								04
20-11-BBT-14'-071812	Grab	SS	14'	7/18/12	1430	1	X								05

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

pH Temp

Remarks: Please CC:smann@ruleengineering.com; bward@ruelengineering.com

5086 5821 2944

Flow Other

Relinquished by: (Signature)	Date: 7/23/12	Time: 1200	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: JF (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1	Bottles Received: 12402
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7-24-12	Time: 0900
				pH Checked:	NCF:

**Encana Oil & Gas**  
**1125 Escalante Drive**  
**Rangely, CO 81648-3600**  
**\*ENCANRCO\***

**Billing Information:**  
 Blake Ford  
 1125 Escalante Drive  
 Rangely, CO 81648-3600  
 (970) 675-4414

**Report to:** Blake Ford  
**Email to:** blake.ford@encana.com

**Analysis/Container/Preservative**

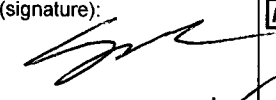
Chain of Custody  
 Page 2 of 2

**ESC**  
 L-A-B S-C-I-E-N-C-E-S

**12065 Lebanon Road**  
**Mt. Juliet, TN 37122**

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

**Project Description:** 20-11 Site Clearance  
**City/State Collected:** Rangely, Co  
**Phone:** (970) 675-4414  
**FAX:**  
**Client Project #:** 20-11  
**ESC Key:** ENCANRCO  
**Collected by:** SRM  
**Site/Facility ID#:** 20-11  
**P.O.#:**

**Collected by (signature):**   
**Immediately Packed on Ice:** N ☒ Y ☒  
**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

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	BTEXGRO / DRO - 8021/8015	SV8270PAHSIM - 8270SIM	SPCON - 9050AMod	SAR - Calc.	RCRA8 Metals + Cu, Ni, and Zn - 6010/7470	CR6SS - 3060A/7196 ,CR3 - Calc.	As	Remarks/Contaminant	Sample # (lab only)
20-11-ETS-071912	Comp	SS	0.5g/1"	7/19/12	1330	3	X	X	X	<input checked="" type="checkbox"/>	X	X	X		LSPL SOL - 46
20-11-NSW-6-071912	Grab	SS	6"	7/19/12	1400	1	X								07

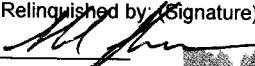




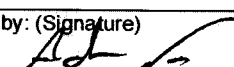
**CoCode ENCANRCO** (lab use only)  
**Template/Prelogin**  
**Shipped Via:**

**Remarks/Contaminant** **Sample # (lab only)**

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

**Remarks:** Please CC:smann@ruleengineering.com; bward@ruelengineering.com

**pH** \_\_\_\_\_ **Temp** \_\_\_\_\_  
**Flow** \_\_\_\_\_ **Other** \_\_\_\_\_

Relinquished by: (Signature) 	Date: 7/23/12	Time: 1200	Received by: (Signature) 	Samples returned via: <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Courier	Condition: JF (lab use only)
Relinquished by: (Signature) 	Date:	Time:	Received by: (Signature) 	Temp: 34"	Bottles Received:
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 7-24-12	Time: 0900
				pH Checked:	NCF:

**CoC Seals Intact:** ☒ Y ☐ N ☐ NA

## Susan Peach

---

**From:** Andy Vann  
**Sent:** Thursday, July 26, 2012 1:49 PM  
**To:** Reporting  
**Subject:** FW: Add the HOLD samples received from \*ENCANRCO-RULEENG\*

Please scan with coc. Thanks

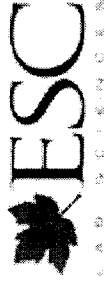
---

**From:** Jarred Willis  
**Sent:** Thursday, July 26, 2012 11:38 AM  
**To:** Login  
**Subject:** Add the HOLD samples received from \*ENCANRCO-RULEENG\*

We received 4 SS per login on the L#s listed below from \*ENCANRCO-RULEENG\* that were marked on the COC to be on HOLD. All of these samples should be marked with a "BG" in the sample ID. Please log all of these samples for ASICP, and add them to the original L#s that they were received with. Do NOT create completely new L#s for these. Change due date to 8/2.

L586506  
L586499  
L585898  
L585883  
L585527  
L585111 - Add to L585652. Do NOT add to L585111.

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)





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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

## Report Summary

Wednesday October 03, 2012

Report Number: L598092


Samples Received: 09/28/12

Client Project: 20-11

Description: 20-11 Remediation

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:

  
Jarred 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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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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

October 03, 2012

Date Received : September 28, 2012  
Description : 20-11 Remediation  
Sample ID : 20-11-ETS-092612  
Collected By : sRM  
Collection Date : 09/26/12 10:00

ESC Sample # : L598092-01

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	09/30/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	09/30/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	09/30/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	09/30/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	09/30/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.2		% Rec.	8021/8015	09/30/12	5
a,a,a-Trifluorotoluene(PID)	103.		% Rec.	8021/8015	09/30/12	5
TPH (GC/FID) High Fraction	19.	4.0	mg/kg	3546/DRO	10/03/12	1
Surrogate recovery(%)						
o-Terphenyl	67.3		% Rec.	3546/DRO	10/03/12	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: 10/03/12 16:56 Printed: 10/03/12 17:14



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

Blake Ford  
EnCana Oil & Gas - Rangely, CO  
1125 Escalante Drive  
Rangely, CO 81648-3600

October 03, 2012

Date Received : September 28, 2012  
Description : 20-11 Remediation  
Sample ID : 20-11-ETS-SP-092612  
Collected By : sRM  
Collection Date : 09/26/12 10:10

ESC Sample # : L598092-02

Site ID : 20-11

Project # : 20-11

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	09/30/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	09/30/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	09/30/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	09/30/12	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	09/30/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	98.3		% Rec.	8021/8015	09/30/12	5
a,a,a-Trifluorotoluene(PID)	103.		% Rec.	8021/8015	09/30/12	5
TPH (GC/FID) High Fraction	26.	4.0	mg/kg	3546/DRO	10/03/12	1
Surrogate recovery(%)						
o-Terphenyl	69.0		% Rec.	3546/DRO	10/03/12	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: 10/03/12 16:56 Printed: 10/03/12 17:14

