

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OIL CONS. DIV DIST. 3

OCT 05 2015

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report ☒ Final Report

Name of Company: Encana Oil & Gas (USA) Inc	Contact: Tucker Smith	
Address: 6584 E Main St	Telephone No. 505-599-2407	
Facility Name: State H No. 004	Facility Type: E&P Oil Production	
Surface Owner: State Lands	Mineral Owner: State Lands	API No. 3003922332

LOCATION OF RELEASE

Unit Letter D	Section 2	Township 23N	Range 07W	Feet from the 970	North/South Line North	Feet from the 910	East/West Line West	County Rio Arriba
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EXACT LOCATION OF RELEASE

Latitude 36.256667 Longitude 107.550833

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 3 bbl	Volume Recovered: 0
Source of Release: Underground Line Leak	Date and Hour of Occurrence unknown	Date and Hour of Discovery 9/16/15 unknown time
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Cory Smith, Environmental Specialist Brandon Foley (State Lands)	
By Whom? Tucker Smith via email	Date and Hour 9/17/15 15:30	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. 0	

If a Watercourse was Impacted, Describe Fully.* NA

Describe Cause of Problem and Remedial Action Taken.*

Darkened soil with hydrocarbon vapor was unearthed while a separate operating company (WPX) was potholing lines while constructing their new transfer line. The closest line was determined to be Encana's transfer line from the State H No.004 well. An excavated trench was opened (80' long 5' wide and average depth 6') and soil assessed and field screened for TPH. Soil and sandstone samples were also submitted to for laboratory analysis (attached).

Well Protection area: No = 0, Distance to Surface Water: 500 ft = 10, Depth to Ground Water: 100 - 200 ft = 0. Site Ranking: 10

Describe Area Affected and Cleanup Action Taken.*

Trench was excavated from the 90 degree elbow at the State H4 transfer line, and across the road. Affected area was focused on the East side of the road and within the trenched area. It is suspected that the cause of affected soil was from an old transfer line that was disconnected and left underground (inactive line was removed). All field screening of soil and sandstone were under 1000 ppm with most under 100 ppm. Excavated soil was backfilled per NMOCD onsite representative Jonathan Kelley and per phone call with NMOCD Environmental Specialist Cory Smith.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Tucker Smith</i> 10/1/15	OIL CONSERVATION DIVISION	
Printed Name: Tucker Smith	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Specialist	Approval Date: 12/16/15	Expiration Date:
E-mail Address: tucker.smith@encana.com	Conditions of Approval:	Attached ☐

NCS1535241015

Date: 9/17/15 Phone: 979-204-7485

* Attach Additional Sheets If Necessary

Site Overview





October 1, 2015

OIL CONS. DIV DIST. 3

OCT 05 2015

Mr. Corey Smith, Environmental Specialist
New Mexico Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos
Aztec, NM 87402

Subject: Encana Oil & Gas (USA) Inc.
Request for Closure of State H4 release, 9/17/2015

Dear Mr. Smith:

By this letter and attachment hereto, Encana Oil & Gas (USA) Inc. (Encana) is hereby providing District III of the New Mexico Oil Conservation Division (NMOCD) with post spill clean up sampling of the State H4 site on State Lands.

The site ranks "10" based on NMOCD Guidelines for Remediation of Leaks, Spills and Releases, rev. August 1993, IV. A. 2(a)

- Depth to groundwater, > 100 ft, Ranking = 0
- Wellhead protection area, No, Ranking = 0
- Distance to surface water body (Aerial map provided), <1000 ft, Ranking = 10

Recommened Remediaton Action Level:	TPH (ppm) ≤1000 EPA 418.1 Field Analysis	TPH (ppm) <1000 EPA 8021	BTEX (ppm) ≤50	Benzene (ppm) ≤10
Sample ID:				
SW Stockpile	120	GRO: ND DRO: ND	ND	ND
SE Stockpile	88	GRO: ND DRO: ND	ND	ND
North stockpile	88	GRO: ND DRO: ND	ND	ND
Excavation – bottom – road side (inside excavation)	88	GRO: ND DRO: ND	ND	ND
SW Sandstone (inside excavation)	97	GRO: ND DRO: ND	ND	ND

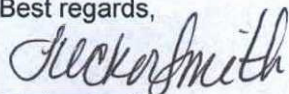
Encana Oil & Gas (USA) Inc.

Republic Plaza 370 – 17th Street Suite 1700 Denver CO 80202 USA 303.623.2300 encana.com

SW Soil (inside excavation)	96	GRO: ND DRO: ND	ND	ND
NW Soil (inside excavation)	96	GRO: ND DRO: ND	ND	ND
NW Sandstone (inside excavation)	92	GRO: ND DRO: ND	ND	ND
Affected Area (highest visual affect)	546	GRO: ND DRO: 146	ND	ND
SE Sandstone (inside excavation)	220	GRO: 50.1 DRO: 90.9	1.15	ND
Pipe (Beeline transfer pipe) (inside excavation)	96	GRO: ND DRO: ND	ND	ND
SE Soil (inside excavation)	288	GRO: ND DRO: 87.5	ND	ND
NE Soil (inside excavation)	196	GRO: 61.7 DRO: 147	0.43	ND
NE Sandstone (inside excavation)	772	GRO: 336 DRO: 284	15.5	0.14
E. Excavation Stockpile Soil #1	64 (Lab analysis)	GRO: ND DRO: 67.2	ND	ND
E. Excavation Stockpile Soil #1	ND (Lab analysis)	GRO: ND DRO: 84.8	ND	ND

Based on the information provided, Encana is requesting Closure of this incident. Please contact me at 505-599-2407 if you have any questions or concerns.

Best regards,



Tucker Smith
Environmental Specialist, San Juan

Attachments

CC: Brandon Foley, State Lands



Analytical Report

Report Summary

Client: Encana Oil & Gas USA

Chain Of Custody Number:

Samples Received: 9/24/2015 8:03:00AM

Job Number: 11196-0196

Work Order: P509049

Project Name/Location: Confirmation Sampling

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 9/25/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW Stockpile	P509049-01A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
SE Stockpile	P509049-02A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
North Stockpile	P509049-03A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
Excavation- Bottom Roadside	P509049-04A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
SW Sandstone	P509049-05A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
SW Soil	P509049-06A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
NW Soil	P509049-07A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
NW Sandstone	P509049-08A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
Affected Area	P509049-09A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
SE Sandstone	P509049-10A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
Pipe	P509049-11A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
SE Soil	P509049-12A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
NE Soil	P509049-13A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.
NE Sandstone	P509049-14A	Solid	09/23/15	09/24/15	Glass Jar, 4 oz.

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Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

SW Stockpile
P509049-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		103 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: n-Nonane		104 %		50-200	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		97.9 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

SE Stockpile
P509049-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		101 %	50-150		1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/24/15	EPA 8015D	
<i>Surrogate: n-Nonane</i>		109 %	50-200		1539013	09/24/15	09/24/15	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		102 %	50-150		1539012	09/24/15	09/24/15	EPA 8015D	

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 370 17th Street
 Denver CO, 80202

Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

North Stockpile
P509049-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: n-Nonane		117 %		50-200	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		102 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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 370 17th Street
 Denver CO, 80202

Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

Excavation- Bottom Roadside
P509049-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: n-Nonane		102 %		50-200	1539013	09/24/15	09/24/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		102 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

SW Sandstone
P509049-05 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		106 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		101 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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 370 17th Street
 Denver CO, 80202

Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

SW Soil
P509049-06 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %	50-150		1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		103 %	50-200		1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		101 %	50-150		1539012	09/24/15	09/24/15	EPA 8015D	

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

NW Soil
P509049-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		99.1 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		97.1 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

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Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

NW Sandstone
P509049-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: n-Nonane</i>		110 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		100 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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laboratory@envirotech-inc.com

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 370 17th Street
 Denver CO, 80202

Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

Affected Area
P509049-09 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		104 %		50-150	1539012	09/24/15	09/24/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/24/15	EPA 8015D	
Diesel Range Organics (C10-C28)	146	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		97.7 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		101 %		50-150	1539012	09/24/15	09/24/15	EPA 8015D	

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 laboratory@envirotech-inc.com

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Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

SE Sandstone
P509049-10 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Ethylbenzene	0.17	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
p,m-Xylene	0.65	0.20	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
o-Xylene	0.33	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total Xylenes	0.98	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total BTEX	1.15	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		104 %		50-150	1539012	09/24/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	50.1	20.0	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	90.9	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: n-Nonane</i>		105 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		102 %		50-150	1539012	09/24/15	09/25/15	EPA 8015D	

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 Project Name: Confirmation Sampling
 Project Number: 11196-0196
 Project Manager: Felipe Aragon

Reported:
 25-Sep-15 12:12

Pipe
P509049-11 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1539012	09/24/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: n-Nonane</i>		99.0 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1539012	09/24/15	09/25/15	EPA 8015D	

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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

SE Soil
P509049-12 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		105 %		50-150	1539012	09/24/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	87.5	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		109 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		103 %		50-150	1539012	09/24/15	09/25/15	EPA 8015D	

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Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

NE Soil
P509049-13 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
p,m-Xylene	0.28	0.20	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
o-Xylene	0.15	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total Xylenes	0.43	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total BTEX	0.43	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		103 %		50-150	1539012	09/24/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	61.7	20.0	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	147	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: n-Nonane</i>		101 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1539012	09/24/15	09/25/15	EPA 8015D	

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Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com



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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

NE Sandstone
P509049-14 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	0.14	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Toluene	1.21	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Ethylbenzene	2.04	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
p,m-Xylene	8.52	0.20	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
o-Xylene	3.57	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total Xylenes	12.1	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Total BTEX	15.5	0.10	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		110 %		50-150	1539012	09/24/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	336	20.0	mg/kg	1	1539012	09/24/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	284	25.0	mg/kg	1	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: n-Nonane		149 %		50-200	1539013	09/24/15	09/25/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		110 %		50-150	1539012	09/24/15	09/25/15	EPA 8015D	

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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539012 - Purge and Trap EPA 5030A										
Blank (1539012-BLK1)				Prepared & Analyzed: 24-Sep-15						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	0.325		"	0.320		102	50-150			
LCS (1539012-BS1)				Prepared & Analyzed: 24-Sep-15						
Benzene	9.09	0.10	mg/kg	8.00		114	70-130			
Toluene	9.02	0.10	"	8.00		113	70-130			
Ethylbenzene	9.11	0.10	"	8.00		114	70-130			
p,m-Xylene	18.1	0.20	"	16.0		113	70-130			
o-Xylene	8.81	0.10	"	8.00		110	70-130			
Surrogate: 4-Bromochlorobenzene-PID	0.330		"	0.320		103	50-150			
Matrix Spike (1539012-MS1)				Source: P509049-01 Prepared & Analyzed: 24-Sep-15						
Benzene	9.17	0.10	mg/kg	8.00	ND	115	54.3-133			
Toluene	9.12	0.10	"	8.00	ND	114	61.4-130			
Ethylbenzene	9.20	0.10	"	8.00	ND	115	61.4-133			
p,m-Xylene	18.3	0.20	"	16.0	ND	114	63.3-131			
o-Xylene	8.83	0.10	"	8.00	ND	110	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	0.330		"	0.320		103	50-150			
Matrix Spike Dup (1539012-MSD1)				Source: P509049-01 Prepared & Analyzed: 24-Sep-15						
Benzene	9.49	0.10	mg/kg	8.00	ND	119	54.3-133	3.43	20	
Toluene	9.43	0.10	"	8.00	ND	118	61.4-130	3.36	20	
Ethylbenzene	9.51	0.10	"	8.00	ND	119	61.4-133	3.32	20	
p,m-Xylene	18.9	0.20	"	16.0	ND	118	63.3-131	3.29	20	
o-Xylene	9.13	0.10	"	8.00	ND	114	63.3-131	3.37	20	
Surrogate: 4-Bromochlorobenzene-PID	0.328		"	0.320		103	50-150			

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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539012 - Purge and Trap EPA 5030A										
Blank (1539012-BLK1)				Prepared & Analyzed: 24-Sep-15						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.319		"	0.320		99.8	50-150			
LCS (1539012-BS1)				Prepared & Analyzed: 24-Sep-15						
Gasoline Range Organics (C6-C10)	106	20.0	mg/kg	84.8		125	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.323		"	0.320		101	50-150			
Matrix Spike (1539012-MS1)				Source: P509049-01 Prepared & Analyzed: 24-Sep-15						
Gasoline Range Organics (C6-C10)	109	20.0	mg/kg	84.8	ND	129	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.324		"	0.320		101	50-150			
Matrix Spike Dup (1539012-MSD1)				Source: P509049-01 Prepared & Analyzed: 24-Sep-15						
Gasoline Range Organics (C6-C10)	112	20.0	mg/kg	84.8	ND	131	70-130	2.08	20	SPK1
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.318		"	0.320		99.5	50-150			

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Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539013 - DRO Extraction EPA 3550M										
Blank (1539013-BLK1)				Prepared & Analyzed: 24-Sep-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	54.1		"	50.0		108	50-200			
LCS (1539013-BS1)				Prepared & Analyzed: 24-Sep-15						
Diesel Range Organics (C10-C28)	528	25.0	mg/kg	500		106	38-132			
Surrogate: n-Nonane	49.3		"	50.0		98.6	50-200			
Matrix Spike (1539013-MS1)				Source: P509049-01		Prepared & Analyzed: 24-Sep-15				
Diesel Range Organics (C10-C28)	526	25.0	mg/kg	500	ND	105	38-132			
Surrogate: n-Nonane	44.5		"	50.0		89.1	50-200			
Matrix Spike Dup (1539013-MSD1)				Source: P509049-01		Prepared & Analyzed: 24-Sep-15				
Diesel Range Organics (C10-C28)	535	25.0	mg/kg	500	ND	107	38-132	1.68	20	
Surrogate: n-Nonane	31.5		"	50.0		63.0	50-200			

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laboratory@envirotech-inc.com



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: Confirmation Sampling
Project Number: 11196-0196
Project Manager: Felipe Aragon

Reported:
25-Sep-15 12:12

Notes and Definitions

SPK1 The spike recovery is outside of quality control limits.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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laboratory@envirotech-inc.com

Client: Encana

Project: Confirmation Sampling

Sampler: F. Burns

Phone: 947-9179

Email(s): Fallynn Burns, Greg Crabtree, Felipe Aragon

Project Manager: Felipe Aragon

RUSH?

☐ 1d
☒ 3d

Lab Use Only

Lab WO#

17509049

Job Number

11195-0196

Analysis and Method

Lab Only

Lab Number

Correct Cont/Prsrv (s) Y/N

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	TCLP Metals	CO Table 910-1	TDS	Lab Number	Correct Cont/Prsrv (s) Y/N
SW Stockpile	9/23/2015	13:15	S	1 - 4 oz./g/cool	X	X						1	Y
SE Stockpile		13:30										2	
North Stockpile		13:45										3	
Excavation - Bottom Roadside		14:00										4	
SW Sandstone		14:15										5	
SW Soil		14:30										6	
NW Soil		14:45										7	
NW Sandstone		15:00										8	
Affected Area		15:15										9	
SE Sandstone		15:45										10	

Relinquished by: (Signature) Fallynn Burns	Date 9-23-15	Time 19:00	Received by: (Signature) Felipe Aragon	Date 9/24/15	Time 8:04	Lab Use Only **Received on Ice ☒ Y ☐ N
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 _____ T2 _____ T3 _____ AVG Temp °C _____

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____

Container Type: g - glass, p - poly/plastic, ag - amber glass

**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

☒ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:



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 envirotec-inc.com
 laboratory@envirotec-inc.com

Client: Encana

Project: Confirmation Sampling

Sampler: F. Burns

Phone: 947-9179

Email(s): Falyann Burns, Greg Crabtree, Felipe Aragon

Project Manager: Felipe Aragon

RUSH?

☐ 1d
☒ 3d

Lab Use Only		Analysis and Method										Lab Only	
Lab WO#		GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	TCLP Metals	CO Table 910-1	TDS			Lab Number	Correct Cont/Prsrv (s) Y/N	
Job Number													
P509049													
11195-0196													
Page 2 of 2													
Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative									
Pipe	9/23/2015	16:00	S	1 - 4 oz./g/cool	X	X						11 Y	
SE Soil		16:15										12	
NE Soil		16:30										13	
NE Sandstone		16:45										14	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only							
Falyann Burns	9-23-15	19:00	Alana M...	9/24/15	8:04	**Received on Ice Y N T1 6.3 T2 6.8 T3 4.9 AVG Temp °C 6.0							
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time								
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other					Container Type: g - glass, p - poly/plastic, ag - amber glass								
**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.													
☒ Sample(s) dropped off after hours to a secure drop off area.					Chain of Custody		Notes/Billing info:						



Analytical Report

Report Summary

Client: Encana Oil & Gas USA

Chain Of Custody Number:

Samples Received: 9/24/2015 2:30:00PM

Job Number: 11195-0087

Work Order: P509050

Project Name/Location: State H4 excavation

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 9/30/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: State H4 excavation
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
30-Sep-15 13:04

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
E. Excavation Stockpile Soil #1	P509050-01A	Solid	09/24/15	09/24/15	Glass Jar, 4 oz.
E. Excavation Stockpile Soil #2	P509050-02A	Solid	09/24/15	09/24/15	Glass Jar, 4 oz.

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laboratory@envirotech-inc.com



Encana Oil & Gas USA 370 17th Street Denver CO, 80202	Project Name: State H4 excavation Project Number: 11195-0087 Project Manager: Tucker Smith	Reported: 30-Sep-15 13:04
---	--	------------------------------

E. Excavation Stockpile Soil #1
P509050-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		105 %		50-150	1539016	09/25/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1539016	09/25/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	67.2	25.0	mg/kg	1	1539018	09/25/15	09/29/15	EPA 8015D	
Surrogate: n-Nonane		97.0 %		50-200	1539018	09/25/15	09/29/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		102 %		50-150	1539016	09/25/15	09/25/15	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1									
Total Petroleum Hydrocarbons	64.0	35.0	mg/kg	1	1539017	09/25/15	09/25/15	EPA 418.1	

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: State H4 excavation
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
30-Sep-15 13:04

E. Excavation Stockpile Soil #2
P509050-02 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %		50-150		1539016	09/25/15	09/25/15	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1		1539016	09/25/15	09/25/15	EPA 8015D	
Diesel Range Organics (C10-C28)	84.8	25.0	mg/kg	1		1539018	09/25/15	09/29/15	EPA 8015D	
Surrogate: n-Nonane		72.3 %		50-200		1539018	09/25/15	09/29/15	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		100 %		50-150		1539016	09/25/15	09/25/15	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1										
Total Petroleum Hydrocarbons	ND	35.0	mg/kg	1		1539017	09/25/15	09/25/15	EPA 418.1	

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Encana Oil & Gas USA	Project Name:	State H4 excavation	Reported: 30-Sep-15 13:04
370 17th Street	Project Number:	11195-0087	
Denver CO, 80202	Project Manager:	Tucker Smith	

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1539016 - Purge and Trap EPA 5030A

Blank (1539016-BLK1)

Prepared & Analyzed: 25-Sep-15

Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	0.327		"	0.320		102	50-150			

LCS (1539016-BS1)

Prepared & Analyzed: 25-Sep-15

Benzene	8.13	0.10	mg/kg	8.00		102	70-130			
Toluene	8.07	0.10	"	8.00		101	70-130			
Ethylbenzene	8.17	0.10	"	8.00		102	70-130			
p,m-Xylene	16.2	0.20	"	16.0		101	70-130			
o-Xylene	7.90	0.10	"	8.00		98.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	0.329		"	0.320		103	50-150			

Matrix Spike (1539016-MS1)

Source: P509050-01

Prepared & Analyzed: 25-Sep-15

Benzene	8.65	0.10	mg/kg	8.00	ND	108	54.3-133			
Toluene	8.61	0.10	"	8.00	ND	108	61.4-130			
Ethylbenzene	8.70	0.10	"	8.00	ND	109	61.4-133			
p,m-Xylene	17.3	0.20	"	16.0	ND	108	63.3-131			
o-Xylene	8.36	0.10	"	8.00	ND	105	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	0.332		"	0.320		104	50-150			

Matrix Spike Dup (1539016-MSD1)

Source: P509050-01

Prepared & Analyzed: 25-Sep-15

Benzene	8.86	0.10	mg/kg	8.00	ND	111	54.3-133	2.42	20	
Toluene	8.83	0.10	"	8.00	ND	110	61.4-130	2.48	20	
Ethylbenzene	8.91	0.10	"	8.00	ND	111	61.4-133	2.42	20	
p,m-Xylene	17.7	0.20	"	16.0	ND	111	63.3-131	2.61	20	
o-Xylene	8.57	0.10	"	8.00	ND	107	63.3-131	2.44	20	
Surrogate: 4-Bromochlorobenzene-PID	0.330		"	0.320		103	50-150			

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Encana Oil & Gas USA	Project Name:	State H4 excavation	Reported: 30-Sep-15 13:04
370 17th Street	Project Number:	11195-0087	
Denver CO, 80202	Project Manager:	Tucker Smith	

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539016 - Purge and Trap EPA 5030A										
Blank (1539016-BLK1)				Prepared & Analyzed: 25-Sep-15						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.321		"	0.320		100	50-150			
LCS (1539016-BS1)				Prepared & Analyzed: 25-Sep-15						
Gasoline Range Organics (C6-C10)	97.2	20.0	mg/kg	84.8		115	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.330		"	0.320		103	50-150			
Matrix Spike (1539016-MS1)				Source: P509050-01		Prepared & Analyzed: 25-Sep-15				
Gasoline Range Organics (C6-C10)	108	20.0	mg/kg	84.8	ND	127	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.331		"	0.320		103	50-150			
Matrix Spike Dup (1539016-MSD1)				Source: P509050-01		Prepared & Analyzed: 25-Sep-15				
Gasoline Range Organics (C6-C10)	111	20.0	mg/kg	84.8	ND	131	70-130	2.93	20	SPK1
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.332		"	0.320		104	50-150			

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: State H4 excavation
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
30-Sep-15 13:04

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539018 - DRO Extraction EPA 3550M										
Blank (1539018-BLK1)				Prepared: 25-Sep-15 Analyzed: 29-Sep-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	52.9		"	50.0		106	50-200			
LCS (1539018-BS1)				Prepared: 25-Sep-15 Analyzed: 29-Sep-15						
Diesel Range Organics (C10-C28)	533	25.0	mg/kg	500		107	38-132			
Surrogate: n-Nonane	50.0		"	50.0		100	50-200			
Matrix Spike (1539018-MS1)				Source: P509050-01		Prepared: 25-Sep-15 Analyzed: 29-Sep-15				
Diesel Range Organics (C10-C28)	576	25.0	mg/kg	500	67.2	102	38-132			
Surrogate: n-Nonane	44.0		"	50.0		87.9	50-200			
Matrix Spike Dup (1539018-MSD1)				Source: P509050-01		Prepared: 25-Sep-15 Analyzed: 29-Sep-15				
Diesel Range Organics (C10-C28)	573	25.0	mg/kg	500	67.2	101	38-132	0.510	20	
Surrogate: n-Nonane	41.6		"	50.0		83.3	50-200			

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Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: State H4 excavation
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
30-Sep-15 13:04

Total Petroleum Hydrocarbons by 418.1 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1539017 - 418 Freon Extraction										
Blank (1539017-BLK1)				Prepared & Analyzed: 25-Sep-15						
Total Petroleum Hydrocarbons	ND	35.0	mg/kg							
Duplicate (1539017-DUP1)				Source: P509050-01 Prepared & Analyzed: 25-Sep-15						
Total Petroleum Hydrocarbons	48.0	35.0	mg/kg		64.0			28.6	30	
Matrix Spike (1539017-MS1)				Source: P509050-01 Prepared & Analyzed: 25-Sep-15						
Total Petroleum Hydrocarbons	2340	35.0	mg/kg	2030	64.0	112	80-120			

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laboratory@envirotech-inc.com



Encana Oil & Gas USA
370 17th Street
Denver CO, 80202

Project Name: State H4 excavation
Project Number: 11195-0087
Project Manager: Tucker Smith

Reported:
30-Sep-15 13:04

Notes and Definitions

SPK1 The spike recovery is outside of quality control limits.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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