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Chris Hines / Matt Kasten
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Tuesday April 23, 2013

Report Number: L630541
Samples Received: 04/13/13
Client Project: M14 PAD ASSESSMENT

Description: M14 PAD ASSESSMENT

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-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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.

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

Chris Hines / Matt Kasten
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVEE-041113 10-12 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 09:18

ESC Sample # : L630541-01

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	04/17/13	1
Chromium,Trivalent	13.	2.0	mg/kg	Calc.	04/22/13	1
ORP	-15.		mV	2580 B-2011	04/16/13	1
pH	12.		su	9045D	04/19/13	1
Sodium Adsorption Ratio	55.			Calc.	04/20/13	1
Specific Conductance	6200		umhos/cm	9050AMod	04/16/13	1
Mercury	0.023	0.020	mg/kg	7471	04/17/13	1
Arsenic	5.1	1.0	mg/kg	6010B	04/22/13	1
Barium	83.	0.25	mg/kg	6010B	04/22/13	1
Cadmium	0.78	0.25	mg/kg	6010B	04/22/13	1
Chromium	13.	0.50	mg/kg	6010B	04/22/13	1
Copper	16.	1.0	mg/kg	6010B	04/22/13	1
Lead	21.	0.25	mg/kg	6010B	04/22/13	1
Nickel	10.	1.0	mg/kg	6010B	04/22/13	1
Selenium	1.4	1.0	mg/kg	6010B	04/22/13	1
Silver	BDL	0.50	mg/kg	6010B	04/22/13	1
Zinc	47.	1.5	mg/kg	6010B	04/22/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	04/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	04/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	04/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.7		% Rec.	8021/8015	04/15/13	5
a,a,a-Trifluorotoluene(PID)	99.4		% Rec.	8021/8015	04/15/13	5
TPH (GC/FID) High Fraction	55.	20.	mg/kg	8015D/DRO	04/18/13	5
Surrogate recovery(%)						
o-Terphenyl	59.8		% Rec.	8015D/DRO	04/18/13	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	0.011	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthene	0.020	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthylene	0.0093	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L630541-01 (PH) - 12@19.7c

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EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

ESC Sample # : L630541-01

Site ID : M14

Project # : M14 PAD ASSESSMENT

Sample ID : M14-SVEE-041113 10-12 FT

Collected By :
Collection Date : 04/11/13 09:18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Chrysene	0.013	0.0060	mg/kg	8270C-SIM	04/19/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluorene	0.040	0.0060	mg/kg	8270C-SIM	04/19/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Naphthalene	0.23	0.020	mg/kg	8270C-SIM	04/19/13	1
Phenanthrene	0.12	0.0060	mg/kg	8270C-SIM	04/19/13	1
Pyrene	0.017	0.0060	mg/kg	8270C-SIM	04/19/13	1
1-Methylnaphthalene	0.24	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Methylnaphthalene	0.36	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Surrogate Recovery						
Nitrobenzene-d5	104.		% Rec.	8270C-SIM	04/19/13	1
2-Fluorobiphenyl	76.2		% Rec.	8270C-SIM	04/19/13	1
p-Terphenyl-d14	79.8		% Rec.	8270C-SIM	04/19/13	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: 04/23/13 13:46 Printed: 04/23/13 13:47
L630541-01 (PH) - 12@19.7c

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EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVEE-041113 25-27 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 09:50

ESC Sample # : L630541-02

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	04/14/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	04/14/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	04/14/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	04/14/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	04/14/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.8		% Rec.	8021/8015	04/14/13	5
a,a,a-Trifluorotoluene(PID)	99.2		% Rec.	8021/8015	04/14/13	5
TPH (GC/FID) High Fraction	BDL	100	mg/kg	8015D/DRO	04/18/13	25
Surrogate recovery(%)						
o-Terphenyl	49.1		% Rec.	8015D/DRO	04/18/13	25
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Surrogate Recovery						
Nitrobenzene-d5	88.8		% Rec.	8270C-SIM	04/19/13	1
2-Fluorobiphenyl	77.6		% Rec.	8270C-SIM	04/19/13	1
p-Terphenyl-d14	80.4		% Rec.	8270C-SIM	04/19/13	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

Chris Hines / Matt Kasten
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVEN-041113 25-27 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 12:00

ESC Sample # : L630541-03

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	04/17/13	1
Chromium,Trivalent	18.	2.0	mg/kg	Calc.	04/22/13	1
ORP	16.		mV	2580 B-2011	04/16/13	1
pH	8.3		su	9045D	04/19/13	1
Sodium Adsorption Ratio	2.8			Calc.	04/20/13	1
Specific Conductance	880		umhos/cm	9050AMod	04/16/13	1
Mercury	0.021	0.020	mg/kg	7471	04/17/13	1
Arsenic	12.	1.0	mg/kg	6010B	04/22/13	1
Barium	180	0.25	mg/kg	6010B	04/22/13	1
Cadmium	BDL	0.25	mg/kg	6010B	04/22/13	1
Chromium	18.	0.50	mg/kg	6010B	04/22/13	1
Copper	20.	1.0	mg/kg	6010B	04/22/13	1
Lead	12.	0.25	mg/kg	6010B	04/22/13	1
Nickel	21.	5.0	mg/kg	6010B	04/23/13	5
Selenium	BDL	1.0	mg/kg	6010B	04/22/13	1
Silver	BDL	0.50	mg/kg	6010B	04/22/13	1
Zinc	81.	7.5	mg/kg	6010B	04/23/13	5
Benzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	04/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	04/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	04/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.7		% Rec.	8021/8015	04/15/13	5
a,a,a-Trifluorotoluene(PID)	99.0		% Rec.	8021/8015	04/15/13	5
TPH (GC/FID) High Fraction	BDL	20.	mg/kg	8015D/DRO	04/19/13	5
Surrogate recovery(%)						
o-Terphenyl	42.9		% Rec.	8015D/DRO	04/19/13	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L630541-03 (PH) - 8.3@20.1c
L630541-03 (DRO) - Previous run also had low SURR recovery. Matrix effect.

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EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVEN-041113 25-27 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 12:00

ESC Sample # : L630541-03

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Surrogate Recovery						
Nitrobenzene-d5	98.5		% Rec.	8270C-SIM	04/19/13	1
2-Fluorobiphenyl	87.3		% Rec.	8270C-SIM	04/19/13	1
p-Terphenyl-d14	93.5		% Rec.	8270C-SIM	04/19/13	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: 04/23/13 13:46 Printed: 04/23/13 13:47
L630541-03 (PH) - 8.3@20.1c
L630541-03 (DRO) - Previous run also had low SURR recovery. Matrix effect.

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REPORT OF ANALYSIS

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EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVEN-041113 35-37 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 12:30

ESC Sample # : L630541-04

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	04/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	04/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	04/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	100.		% Rec.	8021/8015	04/15/13	5
a,a,a-Trifluorotoluene(PID)	99.4		% Rec.	8021/8015	04/15/13	5
TPH (GC/FID) High Fraction	BDL	20.	mg/kg	8015D/DRO	04/18/13	5
Surrogate recovery(%)						
o-Terphenyl	60.7		% Rec.	8015D/DRO	04/18/13	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Surrogate Recovery						
Nitrobenzene-d5	103.		% Rec.	8270C-SIM	04/19/13	1
2-Fluorobiphenyl	85.6		% Rec.	8270C-SIM	04/19/13	1
p-Terphenyl-d14	84.7		% Rec.	8270C-SIM	04/19/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Reported: 04/23/13 13:46 Printed: 04/23/13 13:47

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REPORT OF ANALYSIS

Chris Hines / Matt Kasten
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVESW-041113 30-32 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 15:50

ESC Sample # : L630541-05

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	04/17/13	1
Chromium,Trivalent	19.	2.0	mg/kg	Calc.	04/22/13	1
ORP	35.		mV	2580 B-2011	04/16/13	1
pH	8.2		su	9045D	04/19/13	1
Sodium Adsorption Ratio	2.3			Calc.	04/20/13	1
Specific Conductance	1600		umhos/cm	9050AMod	04/16/13	1
Mercury	BDL	0.020	mg/kg	7471	04/17/13	1
Arsenic	13.	1.0	mg/kg	6010B	04/22/13	1
Barium	180	0.25	mg/kg	6010B	04/22/13	1
Cadmium	BDL	0.25	mg/kg	6010B	04/22/13	1
Chromium	19.	0.50	mg/kg	6010B	04/22/13	1
Copper	20.	1.0	mg/kg	6010B	04/22/13	1
Lead	13.	0.25	mg/kg	6010B	04/22/13	1
Nickel	20.	5.0	mg/kg	6010B	04/23/13	5
Selenium	BDL	1.0	mg/kg	6010B	04/22/13	1
Silver	BDL	0.50	mg/kg	6010B	04/22/13	1
Zinc	72.	7.5	mg/kg	6010B	04/23/13	5
Benzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	04/15/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	04/15/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	04/15/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	04/15/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	99.7		% Rec.	8021/8015	04/15/13	5
a,a,a-Trifluorotoluene(PID)	99.7		% Rec.	8021/8015	04/15/13	5
TPH (GC/FID) High Fraction	BDL	100	mg/kg	8015D/DRO	04/18/13	25
Surrogate recovery(%)						
o-Terphenyl	32.9		% Rec.	8015D/DRO	04/18/13	25
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L630541-05 (PH) - 8.2@20.2c

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REPORT OF ANALYSIS

Chris Hines / Matt Kasten
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

April 23, 2013

Date Received : April 13, 2013
Description : M14 PAD ASSESSMENT

Sample ID : M14-SVESW-041113 30-32 FT

Collected By : Chris McKisson
Collection Date : 04/11/13 15:50

ESC Sample # : L630541-05

Site ID : M14

Project # : M14 PAD ASSESSMENT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	04/19/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	04/19/13	1
Surrogate Recovery						
Nitrobenzene-d5	94.2		% Rec.	8270C-SIM	04/19/13	1
2-Fluorobiphenyl	82.6		% Rec.	8270C-SIM	04/19/13	1
p-Terphenyl-d14	90.3		% Rec.	8270C-SIM	04/19/13	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: 04/23/13 13:46 Printed: 04/23/13 13:47
L630541-05 (PH) - 8.2@20.2c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L630541-01	WG656290	SAMP	Naphthalene	R2628500	J4
	WG656395	SAMP	ORP	R2621943	T8
L630541-02	WG656181	SAMP	TPH (GC/FID) Low Fraction	R2619021	J6
	WG656290	SAMP	Naphthalene	R2628500	J4
	WG656210	SAMP	TPH (GC/FID) High Fraction	R2627321	O
	WG656210	SAMP	o-Terphenyl	R2627321	J7
L630541-03	WG656290	SAMP	Naphthalene	R2628500	J4
	WG656395	SAMP	ORP	R2621943	T8
	WG656848	SAMP	TPH (GC/FID) High Fraction	R2628400	O
	WG656848	SAMP	o-Terphenyl	R2628400	J2
L630541-04	WG656290	SAMP	Naphthalene	R2628500	J4
	WG656210	SAMP	TPH (GC/FID) High Fraction	R2627321	O
L630541-05	WG656290	SAMP	Naphthalene	R2628500	J4
	WG656395	SAMP	ORP	R2621943	T8
	WG656210	SAMP	TPH (GC/FID) High Fraction	R2627321	O
	WG656210	SAMP	o-Terphenyl	R2627321	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
04/23/13 at 13:47:11

TSR Signing Reports: 358
R5 - Desired TAT

Log ALL samples for EDD (COGCC EDD). Log all PAHs as PAHSIM. Try not to report benzene as BDL above a 250x dilution.

Sample: L630541-01 Account: ENCANACO Received: 04/13/13 09:00 Due Date: 04/19/13 00:00 RPT Date: 04/23/13 13:46

Sample: L630541-02 Account: ENCANACO Received: 04/13/13 09:00 Due Date: 04/19/13 00:00 RPT Date: 04/23/13 13:46

Sample: L630541-03 Account: ENCANACO Received: 04/13/13 09:00 Due Date: 04/19/13 00:00 RPT Date: 04/23/13 13:46

Sample: L630541-04 Account: ENCANACO Received: 04/13/13 09:00 Due Date: 04/19/13 00:00 RPT Date: 04/23/13 13:46

Sample: L630541-05 Account: ENCANACO Received: 04/13/13 09:00 Due Date: 04/19/13 00:00 RPT Date: 04/23/13 13:46

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Parachute, CO 81635

Quality Assurance Report
Level II

L630541

April 23, 2013

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Benzene	< .0005	mg/kg			WG656181	04/14/13 17:33
Ethylbenzene	< .0005	mg/kg			WG656181	04/14/13 17:33
Toluene	< .005	mg/kg			WG656181	04/14/13 17:33
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG656181	04/14/13 17:33
Total Xylene	< .0015	mg/kg			WG656181	04/14/13 17:33
a,a,a-Trifluorotoluene(FID)		% Rec.	99.92	59-128	WG656181	04/14/13 17:33
a,a,a-Trifluorotoluene(PID)		% Rec.	99.75	54-144	WG656181	04/14/13 17:33
Specific Conductance	0.990	umhos/cm			WG656528	04/16/13 23:05
Mercury	< .02	mg/kg			WG656482	04/17/13 08:53
Chromium,Hexavalent	< 2	mg/kg			WG656359	04/17/13 13:43
TPH (GC/FID) High Fraction	< 4	mg/kg			WG656210	04/18/13 14:15
o-Terphenyl		% Rec.	77.80	50-150	WG656210	04/18/13 14:15
TPH (GC/FID) High Fraction	< 4	mg/kg			WG656848	04/19/13 11:30
o-Terphenyl		% Rec.	64.90	50-150	WG656848	04/19/13 11:30
Arsenic	< 1	mg/kg			WG656913	04/22/13 20:10
Barium	< .25	mg/kg			WG656913	04/22/13 20:10
Cadmium	< .25	mg/kg			WG656913	04/22/13 20:10
Chromium	< .5	mg/kg			WG656913	04/22/13 20:10
Copper	< 1	mg/kg			WG656913	04/22/13 20:10
Lead	< .25	mg/kg			WG656913	04/22/13 20:10
Nickel	< 1	mg/kg			WG656913	04/22/13 20:10
Selenium	< 1	mg/kg			WG656913	04/22/13 20:10
Silver	< .5	mg/kg			WG656913	04/22/13 20:10
Zinc	< 1.5	mg/kg			WG656913	04/22/13 20:10

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
ORP	mV	140.	140.	0.712	20	L629779-01	WG656395
ORP	mV	0	0	0	20	L630541-01	WG656395
Specific Conductance	umhos/cm	6100	6200	2.28	20	L630541-01	WG656528
Mercury	mg/kg	0.0230	0.0180	23.4*	20	L630573-07	WG656482
Chromium,Hexavalent	mg/kg	0	0	0	20	L630253-05	WG656359
Chromium,Hexavalent	mg/kg	0	0	0	20	L629643-01	WG656359
pH	su	6.90	7.00	0.861	1	L630461-01	WG656966
pH	su	7.70	7.70	0.390	1	L630522-11	WG656966
Arsenic	mg/kg	0	0	0	20	L630536-05	WG656913

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Level II

L630541

April 23, 2013

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Barium	mg/kg	89.0	88.0	1.13	20	L630536-05	WG656913
Chromium	mg/kg	3.60	3.71	3.01	20	L630536-05	WG656913
Copper	mg/kg	15.0	15.8	5.19	20	L630536-05	WG656913
Lead	mg/kg	48.0	59.0	20.6*	20	L630536-05	WG656913
Nickel	mg/kg	5.60	6.28	11.4	20	L630536-05	WG656913
Selenium	mg/kg	0	0	0	20	L630536-05	WG656913
Silver	mg/kg	0	0	0	20	L630536-05	WG656913
Zinc	mg/kg	27.0	31.4	15.1	20	L630536-05	WG656913
Cadmium	mg/kg	0	0	0	20	L630536-05	WG656913

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
Benzene	mg/kg	.05	0.0481	96.2	76-113	WG656181
Ethylbenzene	mg/kg	.05	0.0500	100.	78-115	WG656181
Toluene	mg/kg	.05	0.0490	97.9	76-114	WG656181
Total Xylene	mg/kg	.15	0.154	102.	81-118	WG656181
a,a,a-Trifluorotoluene(PID)				101.4	54-144	WG656181
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.54	82.5	67-135	WG656181
a,a,a-Trifluorotoluene(FID)				100.1	59-128	WG656181
ORP	mV	228	237.	104.	95.6-104.	WG656395
Specific Conductance	umhos/cm	878	896.	102.	85-115	WG656528
Mercury	mg/kg	12.4	14.0	113.	71.6-127.7	WG656482
Chromium,Hexavalent	mg/kg	146	127.	87.0	80-120	WG656359
TPH (GC/FID) High Fraction	mg/kg	60	46.8	78.0	50-150	WG656210
o-Terphenyl				80.50	50-150	WG656210
pH	su	5.79	5.86	101.	98.3-101.7	WG656966
TPH (GC/FID) High Fraction	mg/kg	60	37.5	62.4	50-150	WG656848
o-Terphenyl				58.50	50-150	WG656848
Arsenic	mg/kg	237	226.	95.4	83.1-117	WG656913
Barium	mg/kg	252	226.	89.7	84.1-116	WG656913
Cadmium	mg/kg	191	185.	96.9	83.2-117	WG656913
Chromium	mg/kg	128	113.	88.3	81.3-118	WG656913
Copper	mg/kg	123	115.	93.5	83.7-116	WG656913
Lead	mg/kg	103	97.1	94.3	83.1-117	WG656913
Nickel	mg/kg	118	112.	94.9	82-118	WG656913
Selenium	mg/kg	110	110.	100.	78.7-122	WG656913
Silver	mg/kg	47.3	44.0	93.0	66.2-134	WG656913
Zinc	mg/kg	183	164.	89.6	82-118	WG656913

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Quality Assurance Report
Level II

L630541

April 23, 2013

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Benzene	mg/kg	0.0452	0.0481	90.0	76-113	6.24	20	WG656181
Ethylbenzene	mg/kg	0.0467	0.0500	93.0	78-115	6.71	20	WG656181
Toluene	mg/kg	0.0456	0.0490	91.0	76-114	7.03	20	WG656181
Total Xylene	mg/kg	0.143	0.154	95.0	81-118	7.22	20	WG656181
a,a,a-Trifluorotoluene(PID)				101.7	54-144			WG656181
TPH (GC/FID) Low Fraction	mg/kg	4.71	4.54	86.0	67-135	3.67	20	WG656181
a,a,a-Trifluorotoluene(FID)				100.3	59-128			WG656181
ORP	mV	236.	237.	104.	95.6-104.	0.423	20	WG656395
Specific Conductance	umhos/	886.	896.	101.	85-115	1.12	20	WG656528
Chromium,Hexavalent	mg/kg	127.	127.	87.0	80-120	0	20	WG656359
TPH (GC/FID) High Fraction	mg/kg	44.2	46.8	74.0	50-150	5.68	20	WG656210
o-Terphenyl				75.70	50-150			WG656210
pH	su	5.87	5.86	101.	98.3-101.7	0.171	20	WG656966
TPH (GC/FID) High Fraction	mg/kg	38.0	37.5	63.0	50-150	1.40	20	WG656848
o-Terphenyl				60.10	50-150			WG656848

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzene	mg/kg	0.189	0	.05	75.7	32-137	L630541-02	WG656181
Ethylbenzene	mg/kg	0.155	0	.05	62.1	10-150	L630541-02	WG656181
Toluene	mg/kg	0.176	0	.05	70.4	20-142	L630541-02	WG656181
Total Xylene	mg/kg	0.482	0.00550	.15	63.6	16-141	L630541-02	WG656181
a,a,a-Trifluorotoluene(PID)					101.1	54-144		WG656181
TPH (GC/FID) Low Fraction	mg/kg	15.1	0.0927	5.5	54.4*	55-109	L630541-02	WG656181
a,a,a-Trifluorotoluene(FID)					98.81	59-128		WG656181
Mercury	mg/kg	0.287	0.0180	.25	108.	80-120	L630573-07	WG656482
Chromium,Hexavalent	mg/kg	7.08	0	20	35.4*	75-125	L629779-01	WG656359
TPH (GC/FID) High Fraction	mg/kg	35.9	1.14	60	57.9	50-150	L630368-11	WG656210
o-Terphenyl					74.80	50-150		WG656210
TPH (GC/FID) High Fraction	mg/kg	45.2	0	60	75.3	50-150	L631001-08	WG656848
o-Terphenyl					73.90	50-150		WG656848
1-Methylnaphthalene	mg/kg	0.0671	0.000605	.08	83.1	70-130	L630518-11	WG656290
2-Chloronaphthalene	mg/kg	0.0645	0	.08	80.6	70-130	L630518-11	WG656290
2-Methylnaphthalene	mg/kg	0.0661	0.000662	.08	81.8	70-130	L630518-11	WG656290
Acenaphthene	mg/kg	0.0644	0	.08	80.6	70-130	L630518-11	WG656290
Acenaphthylene	mg/kg	0.0663	0	.08	82.9	70-130	L630518-11	WG656290
Anthracene	mg/kg	0.0691	0	.08	86.4	70-130	L630518-11	WG656290

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Level II

L630541

April 23, 2013

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzo(a)anthracene	mg/kg	0.0663	0	.08	82.9	70-130	L630518-11	WG656290
Benzo(a)pyrene	mg/kg	0.0657	0	.08	82.1	70-130	L630518-11	WG656290
Benzo(b)fluoranthene	mg/kg	0.0674	0	.08	84.3	70-130	L630518-11	WG656290
Benzo(g,h,i)perylene	mg/kg	0.0672	0	.08	83.9	70-130	L630518-11	WG656290
Benzo(k)fluoranthene	mg/kg	0.0618	0	.08	77.2	70-130	L630518-11	WG656290
Chrysene	mg/kg	0.0659	0	.08	82.3	70-130	L630518-11	WG656290
Dibenz(a,h)anthracene	mg/kg	0.0661	0	.08	82.6	70-130	L630518-11	WG656290
Fluoranthene	mg/kg	0.0679	0	.08	84.8	70-130	L630518-11	WG656290
Fluorene	mg/kg	0.0642	0	.08	80.2	70-130	L630518-11	WG656290
Indeno(1,2,3-cd)pyrene	mg/kg	0.0660	0	.08	82.5	70-130	L630518-11	WG656290
Naphthalene	mg/kg	0.0603	0	.08	75.3	70-130	L630518-11	WG656290
Phenanthrene	mg/kg	0.0658	0	.08	82.2	70-130	L630518-11	WG656290
Pyrene	mg/kg	0.0683	0	.08	85.4	70-130	L630518-11	WG656290
2-Fluorobiphenyl					77.40	70-130		WG656290
Nitrobenzene-d5					84.80	70-130		WG656290
p-Terphenyl-d14					81.40	70-130		WG656290
Arsenic	mg/kg	18.4	0	50	36.8*	75-125	L630536-05	WG656913
Barium	mg/kg	128.	88.0	50	80.0	75-125	L630536-05	WG656913
Chromium	mg/kg	43.8	3.71	50	80.2	75-125	L630536-05	WG656913
Copper	mg/kg	55.9	15.8	50	80.2	75-125	L630536-05	WG656913
Lead	mg/kg	90.0	59.0	50	62.0*	75-125	L630536-05	WG656913
Nickel	mg/kg	46.5	6.28	50	80.4	75-125	L630536-05	WG656913
Selenium	mg/kg	27.8	0	50	55.6*	75-125	L630536-05	WG656913
Silver	mg/kg	39.2	0	50	78.4	75-125	L630536-05	WG656913
Zinc	mg/kg	70.9	31.4	50	79.0	75-125	L630536-05	WG656913
Cadmium	mg/kg	44.2	0	10	88.4	75-125	L630536-05	WG656913

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/kg	0.206	0.189	82.4	32-137	8.46	39	L630541-02	WG656181
Ethylbenzene	mg/kg	0.188	0.155	75.3	10-150	19.2	44	L630541-02	WG656181
Toluene	mg/kg	0.198	0.176	79.1	20-142	11.6	42	L630541-02	WG656181
Total Xylene	mg/kg	0.577	0.482	76.2	16-141	17.9	46	L630541-02	WG656181
a,a,a-Trifluorotoluene(PID)				100.7	54-144				WG656181
TPH (GC/FID) Low Fraction	mg/kg	15.8	15.1	57.0	55-109	4.51	20	L630541-02	WG656181
a,a,a-Trifluorotoluene(FID)				99.05	59-128				WG656181
Mercury	mg/kg	0.272	0.287	102.	80-120	5.44	20	L630573-07	WG656482
Chromium,Hexavalent	mg/kg	7.08	7.08	35.4*	75-125	0	20	L629779-01	WG656359
TPH (GC/FID) High Fraction	mg/kg	38.2	35.9	61.7	50-150	6.20	20	L630368-11	WG656210
o-Terphenyl				82.30	50-150				WG656210
TPH (GC/FID) High Fraction	mg/kg	46.9	45.2	78.2	50-150	3.82	20	L631001-08	WG656848
o-Terphenyl				76.90	50-150				WG656848
1-Methylnaphthalene	mg/kg	0.0646	0.0671	79.9	70-130	3.84	25	L630518-11	WG656290
2-Chloronaphthalene	mg/kg	0.0636	0.0645	79.4	70-130	1.44	25	L630518-11	WG656290
2-Methylnaphthalene	mg/kg	0.0643	0.0661	79.5	70-130	2.82	25	L630518-11	WG656290
Acenaphthene	mg/kg	0.0627	0.0644	78.4	70-130	2.78	25	L630518-11	WG656290

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Est. 1970

EnCana Oil & Gas Inc. - CO
Chris Hines / Matt Kasten
143 Diamond Avenue

Parachute, CO 81635

Quality Assurance Report
Level II

L630541

April 23, 2013

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Acenaphthylene	mg/kg	0.0649	0.0663	81.2	70-130	2.10	25	L630518-11	WG656290
Anthracene	mg/kg	0.0678	0.0691	84.7	70-130	1.96	25	L630518-11	WG656290
Benzo(a)anthracene	mg/kg	0.0641	0.0663	80.1	70-130	3.41	25	L630518-11	WG656290
Benzo(a)pyrene	mg/kg	0.0631	0.0657	78.9	70-130	4.00	25	L630518-11	WG656290
Benzo(b)fluoranthene	mg/kg	0.0637	0.0674	79.6	70-130	5.69	25	L630518-11	WG656290
Benzo(g,h,i)perylene	mg/kg	0.0649	0.0672	81.2	70-130	3.34	25	L630518-11	WG656290
Benzo(k)fluoranthene	mg/kg	0.0605	0.0618	75.6	70-130	2.09	25	L630518-11	WG656290
Chrysene	mg/kg	0.0645	0.0659	80.6	70-130	2.12	25	L630518-11	WG656290
Dibenz(a,h)anthracene	mg/kg	0.0640	0.0661	80.0	70-130	3.22	25	L630518-11	WG656290
Fluoranthene	mg/kg	0.0662	0.0679	82.7	70-130	2.54	25	L630518-11	WG656290
Fluorene	mg/kg	0.0632	0.0642	79.0	70-130	1.52	25	L630518-11	WG656290
Indeno(1,2,3-cd)pyrene	mg/kg	0.0640	0.0660	80.0	70-130	3.00	25	L630518-11	WG656290
Naphthalene	mg/kg	0.0580	0.0603	72.5	70-130	3.86	25	L630518-11	WG656290
Phenanthrene	mg/kg	0.0650	0.0658	81.2	70-130	1.24	25	L630518-11	WG656290
Pyrene	mg/kg	0.0665	0.0683	83.1	70-130	2.71	25	L630518-11	WG656290
2-Fluorobiphenyl				77.60	70-130				WG656290
Nitrobenzene-d5				85.50	70-130				WG656290
p-Terphenyl-d14				78.70	70-130				WG656290
Arsenic	mg/kg	20.5	18.4	41.0*	75-125	10.8	20	L630536-05	WG656913
Barium	mg/kg	132.	128.	88.0	75-125	3.08	20	L630536-05	WG656913
Chromium	mg/kg	46.5	43.8	85.6	75-125	5.98	20	L630536-05	WG656913
Copper	mg/kg	59.4	55.9	87.2	75-125	6.07	20	L630536-05	WG656913
Lead	mg/kg	91.7	90.0	65.4*	75-125	1.87	20	L630536-05	WG656913
Nickel	mg/kg	49.7	46.5	86.8	75-125	6.65	20	L630536-05	WG656913
Selenium	mg/kg	30.9	27.8	61.8*	75-125	10.6	20	L630536-05	WG656913
Silver	mg/kg	41.4	39.2	82.8	75-125	5.46	20	L630536-05	WG656913
Zinc	mg/kg	78.7	70.9	94.6	75-125	10.4	20	L630536-05	WG656913
Cadmium	mg/kg	46.4	44.2	92.8	75-125	4.86	20	L630536-05	WG656913

Serial Dilution

Batch number /Run number / Sample number cross reference

WG656181: R2619021: L630541-01 02 03 04 05
WG656395: R2621943: L630541-01 03 05
WG656528: R2621985: L630541-01 03 05
WG656482: R2622441: L630541-01 03 05
WG656359: R2622960: L630541-01 03 05
WG656210: R2627321: L630541-01 02 04 05
WG656966: R2627860: L630541-01 03 05
WG656848: R2628400: L630541-03
WG656290: R2628500: L630541-01 02 03 04 05
WG656683: R2629981: L630541-01 03 05
WG656913: R2632062: L630541-01 03 05

* * Calculations are performed prior to rounding of reported values.
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L630541

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.