

Analytes (BDL = Below Detection Limit; ND = Non Detect)

Allowable Concentration -->				Organic Compounds in Soil (mg/kg [ppm])																	Inorganics in Soil			Metals in Soil (mg/kg [ppm])															
Location	Sample Date:	Sample Matrix	Matrix Notes	500			0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000		(<12)	(6-9)		0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000
				TPH (total volatile and extractable petroleum hydrocarbons)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-CD)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc	
K8W	11/02/10	Cuttings		181.7	1.7	180	BDL	BDL	BDL	BDL	0.007	0.007	0.0067	BDL	BDL	BDL	BDL	BDL	BDL	0.016	BDL	0.059	BDL	0.94	25	8.6	2.6	9400	BDL	14	BDL	15	6.1	0.027	8.5	6.5	BDL	43	
K8W	08/22/11	Cuttings		72.5	3.5	69	0.006	BDL	BDL	0.025	0.006	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.019	BDL	0.053	BDL	2	31	8.1	2.6	9200	0.34	12	BDL	14	5.4	BDL	7.1	1.4	1.6	27	



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Chris Hines or Brad Kieding
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Tuesday November 16, 2010

Report Number: L487403

Samples Received: 11/04/10

Client Project: K8W

Description: K8W

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jayred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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

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REPORT OF ANALYSIS

Chris Hines or Brad Kieding
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-NEB-11210

Collected By : Jake Harris
Collection Date : 11/02/10 13:50

ESC Sample # : L487403-01

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	9.2	1.0	mg/kg	6010B	11/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 11/16/10 13:51 Printed: 11/16/10 14:15



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

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-SEB-11210

Collected By : Jake Harris
Collection Date : 11/02/10 14:10

ESC Sample # : L487403-02

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	8.8	1.0	mg/kg	6010B	11/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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2717 County Road 215, Suite 100
Parachute, CO 81635

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-NB-11210

Collected By : Jake Harris
Collection Date : 11/02/10 13:40

ESC Sample # : L487403-03

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	10.	1.0	mg/kg	6010B	11/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Parachute, CO 81635

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-EB-11210

Collected By : Jake Harris
Collection Date : 11/02/10 14:00

ESC Sample # : L487403-04

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	8.8	1.0	mg/kg	6010B	11/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Parachute, CO 81635

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-SB-11210

Collected By : Jake Harris
Collection Date : 11/02/10 14:20

ESC Sample # : L487403-05

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.9	1.0	mg/kg	6010B	11/13/10	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 Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-CUTTINGS

Collected By : Jake Harris
Collection Date : 11/02/10 15:00

ESC Sample # : L487403-06

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	11/10/10	1
Chromium, Trivalent	14.	2.0	mg/kg	Calc.	11/09/10	1
ORP	23.		mV	2580	11/10/10	1
pH	8.6		su	9045D	11/10/10	1
Sodium Adsorption Ratio	25.			Calc.	11/14/10	1
Specific Conductance	940		umhos/cm	9050AMod	11/08/10	1
Mercury	0.027	0.020	mg/kg	7471	11/06/10	1
Arsenic	2.6	1.0	mg/kg	6010B	11/09/10	1
Barium	9400	0.25	mg/kg	6010B	11/09/10	1
Cadmium	BDL	0.25	mg/kg	6010B	11/09/10	1
Chromium	14.	0.50	mg/kg	6010B	11/09/10	1
Copper	15.	1.0	mg/kg	6010B	11/09/10	1
Lead	6.1	0.25	mg/kg	6010B	11/09/10	1
Nickel	8.5	1.0	mg/kg	6010B	11/09/10	1
Selenium	6.5	1.0	mg/kg	6010B	11/09/10	1
Silver	BDL	0.50	mg/kg	6010B	11/09/10	1
Zinc	43.	1.5	mg/kg	6010B	11/09/10	1
TPH (GC/FID) Low Fraction	1.7	0.50	mg/kg	8015D/GRO	11/06/10	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	82.2		% Rec.	602/8015	11/06/10	5
Benzene	BDL	0.0050	mg/kg	8260B	11/05/10	5
Toluene	BDL	0.025	mg/kg	8260B	11/05/10	5
Ethylbenzene	BDL	0.0050	mg/kg	8260B	11/05/10	5
Total Xylenes	BDL	0.015	mg/kg	8260B	11/05/10	5
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	11/05/10	5
Dibromofluoromethane	93.5		% Rec.	8260B	11/05/10	5
a,a,a-Trifluorotoluene	111.		% Rec.	8260B	11/05/10	5
4-Bromofluorobenzene	113.		% Rec.	8260B	11/05/10	5
TPH (GC/FID) High Fraction	180	4.0	mg/kg	3546/DRO	11/08/10	1
Surrogate recovery(%) o-Terphenyl	92.3		% Rec.	3546/DRO	11/08/10	1

Polynuclear Aromatic Hydrocarbons

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L487403-06 (PH) - 8.6@21.0c



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November 16, 2010

Date Received : November 04, 2010
Description : K8W

Sample ID : K8W-CUTTINGS

Collected By : Jake Harris
Collection Date : 11/02/10 15:00

ESC Sample # : L487403-06

Site ID :

Project # : K8W

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Anthracene	0.0070	0.0060	mg/kg	8270C-SIM	11/09/10	1
Acenaphthene	0.0065	0.0060	mg/kg	8270C-SIM	11/09/10	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Benzo(a)anthracene	0.0067	0.0060	mg/kg	8270C-SIM	11/09/10	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Fluorene	0.016	0.0060	mg/kg	8270C-SIM	11/09/10	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Naphthalene	0.059	0.0060	mg/kg	8270C-SIM	11/09/10	1
Phenanthrene	0.029	0.0060	mg/kg	8270C-SIM	11/09/10	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
1-Methylnaphthalene	0.043	0.0060	mg/kg	8270C-SIM	11/09/10	1
2-Methylnaphthalene	0.12	0.0060	mg/kg	8270C-SIM	11/09/10	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	11/09/10	1
Surrogate Recovery						
Nitrobenzene-d5	101.		% Rec.	8270C-SIM	11/09/10	1
2-Fluorobiphenyl	76.6		% Rec.	8270C-SIM	11/09/10	1
p-Terphenyl-d14	69.6		% Rec.	8270C-SIM	11/09/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 11/16/10 13:51 Printed: 11/16/10 14:15
L487403-06 (PH) - 8.6@21.0c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L487403-06	WG507295	SAMP	1-Methylnaphthalene	R1465130	J3
	WG507295	SAMP	2-Methylnaphthalene	R1465130	J3
	WG507295	SAMP	2-Chloronaphthalene	R1465130	J3
	WG507070	SAMP	Chromium, Hexavalent	R1466669	J3

Attachment B
Explanation of QC Qualifier Codes

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

Qualifier Report Information

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

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
11/16/10 at 14:15:47

TSR Signing Reports: 358
R5 - Desired TAT

Log all samples beginning with different sample numbers to separate reports. Ex.- M34 N PIT and M34 S PIT go on one L#, but M34 S PIT and E34 S PIT go on separate L #s. Log project # as project name.

Sample: L487403-01 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51

Sample: L487403-02 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51

Sample: L487403-03 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51

Sample: L487403-04 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51

Sample: L487403-05 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51

Sample: L487403-06 Account: ENCANACO Received: 11/04/10 09:00 Due Date: 11/11/10 00:00 RPT Date: 11/16/10 13:51



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Parachute, CO 81635

Quality Assurance Report
Level II

L487403

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Est. 1970

November 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG507045	11/06/10 00:14
a,a,a-Trifluorotoluene(FID)		% Rec.	79.54	59-128	WG507045	11/06/10 00:14
Mercury	< .02	mg/kg			WG506986	11/06/10 11:43
Benzene	< .001	mg/kg			WG507034	11/05/10 11:15
Ethylbenzene	< .001	mg/kg			WG507034	11/05/10 11:15
Toluene	< .005	mg/kg			WG507034	11/05/10 11:15
Total Xylenes	< .003	mg/kg			WG507034	11/05/10 11:15
4-Bromofluorobenzene		% Rec.	107.8	59-140	WG507034	11/05/10 11:15
Dibromofluoromethane		% Rec.	97.13	63-139	WG507034	11/05/10 11:15
Toluene-d8		% Rec.	103.6	84-116	WG507034	11/05/10 11:15
a,a,a-Trifluorotoluene		% Rec.	112.0	80-118	WG507034	11/05/10 11:15
TPH (GC/FID) High Fraction	< 4	ppm			WG507106	11/06/10 09:36
o-Terphenyl		% Rec.	76.90	50-150	WG507106	11/06/10 09:36
Specific Conductance	0.910	umhos/cm			WG507155	11/08/10 15:50
1-Methylnaphthalene	< .006	mg/kg			WG507295	11/09/10 09:46
2-Chloronaphthalene	< .006	mg/kg			WG507295	11/09/10 09:46
2-Methylnaphthalene	< .006	mg/kg			WG507295	11/09/10 09:46
Acenaphthene	< .006	mg/kg			WG507295	11/09/10 09:46
Acenaphthylene	< .006	mg/kg			WG507295	11/09/10 09:46
Anthracene	< .006	mg/kg			WG507295	11/09/10 09:46
Benzo(a)anthracene	< .006	mg/kg			WG507295	11/09/10 09:46
Benzo(a)pyrene	< .006	mg/kg			WG507295	11/09/10 09:46
Benzo(b)fluoranthene	< .006	mg/kg			WG507295	11/09/10 09:46
Benzo(g,h,i)perylene	< .006	mg/kg			WG507295	11/09/10 09:46
Benzo(k)fluoranthene	< .006	mg/kg			WG507295	11/09/10 09:46
Chrysene	< .006	mg/kg			WG507295	11/09/10 09:46
Dibenz(a,h)anthracene	< .006	mg/kg			WG507295	11/09/10 09:46
Fluoranthene	< .006	mg/kg			WG507295	11/09/10 09:46
Fluorene	< .006	mg/kg			WG507295	11/09/10 09:46
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG507295	11/09/10 09:46
Naphthalene	< .006	mg/kg			WG507295	11/09/10 09:46
Phenanthrene	< .006	mg/kg			WG507295	11/09/10 09:46
Pyrene	< .006	mg/kg			WG507295	11/09/10 09:46
2-Fluorobiphenyl		% Rec.	73.84	21-120	WG507295	11/09/10 09:46
Nitrobenzene-d5		% Rec.	57.35	33-114	WG507295	11/09/10 09:46
p-Terphenyl-d14		% Rec.	73.59	18-142	WG507295	11/09/10 09:46
Arsenic	< 1	mg/kg			WG507248	11/09/10 11:01
Barium	< .25	mg/kg			WG507248	11/09/10 11:01
Cadmium	< .25	mg/kg			WG507248	11/09/10 11:01
Chromium	< .5	mg/kg			WG507248	11/09/10 11:01
Copper	< 1	mg/kg			WG507248	11/09/10 11:01
Lead	< .25	mg/kg			WG507248	11/09/10 11:01
Nickel	< 1	mg/kg			WG507248	11/09/10 11:01
Selenium	< 1	mg/kg			WG507248	11/09/10 11:01
Silver	< .5	mg/kg			WG507248	11/09/10 11:01
Zinc	< 1.5	mg/kg			WG507248	11/09/10 11:01

* Performance of this Analyte is outside of established criteria.

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



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November 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Chromium,Hexavalent	< 2	mg/kg			WG507070	11/10/10 12:22
pH	4.60	su			WG507596	11/10/10 15:25
Arsenic	< 1	mg/kg			WG507613	11/11/10 23:51
Arsenic	< 1	mg/kg			WG507473	11/13/10 12:40

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.0310	0.0360	14.9	20	L487412-02	WG506986
Specific Conductance	umhos/cm	130.	120.	10.1	20	L487050-08	WG507155
Specific Conductance	umhos/cm	1100	940.	15.6	20	L487403-06	WG507155
Arsenic	mg/kg	3.50	3.80	8.79	20	L487107-06	WG507248
Barium	mg/kg	100.	110.	10.0	20	L487107-06	WG507248
Cadmium	mg/kg	0	0.140	NA	20	L487107-06	WG507248
Chromium	mg/kg	13.0	14.0	9.74	20	L487107-06	WG507248
Copper	mg/kg	8.80	10.4	16.2	20	L487107-06	WG507248
Lead	mg/kg	5.80	6.20	5.81	20	L487107-06	WG507248
Nickel	mg/kg	10.0	12.2	17.9	20	L487107-06	WG507248
Selenium	mg/kg	8.80	10.0	13.0	20	L487107-06	WG507248
Silver	mg/kg	0	0	0	20	L487107-06	WG507248
Zinc	mg/kg	32.0	35.2	10.1	20	L487107-06	WG507248
Chromium,Hexavalent	mg/kg	0	0	0	20	L487403-06	WG507070
Chromium,Hexavalent	mg/kg	0	0	0	20	L486688-05	WG507070
ORP	mV	23.0	26.0	12.2	20	L486688-01	WG507656
ORP	mV	19.0	26.0	31.1*	20	L487829-01	WG507656
pH	su	8.90	9.10	2.22*	1	L486869-01	WG507596
pH	su	5.70	5.20	9.17*	1	L487829-01	WG507596
Arsenic	mg/kg	17.0	17.0	0	20	L487552-03	WG507613
Arsenic	mg/kg	8.40	8.80	4.06	20	L487403-04	WG507473

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.98	109.	67-135	WG507045
a,a,a-Trifluorotoluene(FID)				84.29	59-128	WG507045
Mercury	mg/kg	8.77	11.1	127.	71.6-127.7	WG506986

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Level II

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.025	0.0269	107.	65-128	WG507034
Ethylbenzene	mg/kg	.025	0.0292	117.	74-128	WG507034
Toluene	mg/kg	.025	0.0285	114.	70-120	WG507034
Total Xylenes	mg/kg	.075	0.0880	117.	74-127	WG507034
4-Bromofluorobenzene				102.4	59-140	WG507034
Dibromofluoromethane				99.26	63-139	WG507034
Toluene-d8				104.3	84-116	WG507034
a,a,a-Trifluorotoluene				110.6	80-118	WG507034
TPH (GC/FID) High Fraction	ppm	60	57.2	95.3	50-150	WG507106
o-Terphenyl				86.34	50-150	WG507106
Specific Conductance	umhos/cm	406	420.	103.	85-115	WG507155
1-Methylnaphthalene	mg/kg	.033	0.0206	62.3	41-110	WG507295
2-Chloronaphthalene	mg/kg	.033	0.0218	66.0	43-109	WG507295
2-Methylnaphthalene	mg/kg	.033	0.0211	63.9	38-104	WG507295
Acenaphthene	mg/kg	.033	0.0300	90.9	48-103	WG507295
Acenaphthylene	mg/kg	.033	0.0273	82.6	43-106	WG507295
Anthracene	mg/kg	.033	0.0274	83.1	51-110	WG507295
Benzo(a)anthracene	mg/kg	.033	0.0227	68.8	38-126	WG507295
Benzo(a)pyrene	mg/kg	.033	0.0250	75.6	47-118	WG507295
Benzo(b)fluoranthene	mg/kg	.033	0.0244	74.0	47-118	WG507295
Benzo(g,h,i)perylene	mg/kg	.033	0.0293	88.9	40-125	WG507295
Benzo(k)fluoranthene	mg/kg	.033	0.0265	80.2	45-121	WG507295
Chrysene	mg/kg	.033	0.0270	81.7	35-135	WG507295
Dibenz(a,h)anthracene	mg/kg	.033	0.0299	90.7	41-124	WG507295
Fluoranthene	mg/kg	.033	0.0289	87.6	50-114	WG507295
Fluorene	mg/kg	.033	0.0273	82.8	49-109	WG507295
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0295	89.3	40-126	WG507295
Naphthalene	mg/kg	.033	0.0287	86.9	36-100	WG507295
Phenanthrene	mg/kg	.033	0.0240	72.8	46-108	WG507295
Pyrene	mg/kg	.033	0.0266	80.7	30-136	WG507295
2-Fluorobiphenyl				79.26	21-120	WG507295
Nitrobenzene-d5				69.53	33-114	WG507295
p-Terphenyl-d14				78.07	18-142	WG507295
Arsenic	mg/kg	192	169.	88.0	78.6-120.8	WG507248
Barium	mg/kg	420	414.	98.6	78.8-121.4	WG507248
Cadmium	mg/kg	70.1	65.4	93.3	78.5-121.5	WG507248
Chromium	mg/kg	168	165.	98.2	80.4-120.2	WG507248
Copper	mg/kg	122	123.	101.	81.6-119.7	WG507248
Lead	mg/kg	113	102.	90.3	77.3-122.1	WG507248
Nickel	mg/kg	74.1	70.1	94.6	78.8-121.2	WG507248
Selenium	mg/kg	176	176.	100.	75.6-125.0	WG507248
Silver	mg/kg	115	109.	94.8	66-133.9	WG507248
Zinc	mg/kg	437	420.	96.1	78.5-121.7	WG507248
Chromium, Hexavalent	mg/kg	100	97.6	97.6	50-143	WG507070
ORP	mV	229	220.	96.1	95.6-104.37	WG507656

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Analyte	Units	Laboratory Control		Sample	% Rec	Limit	Batch	
		Known Val		Result				
pH	su	6.92		6.90	99.7	97.98-102.02	WG507596	
Arsenic	mg/kg	192		184.	95.8	78.6-120.8	WG507613	
Arsenic	mg/kg	192		174.	90.6	78.6-120.8	WG507473	
Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
TPH (GC/FID) Low Fraction	mg/kg	5.73	5.98	104.	67-135	4.43	20	WG507045
a,a,a-Trifluorotoluene(FID)				83.19	59-128			WG507045
Benzene	mg/kg	0.0264	0.0269	106.	65-128	1.79	20	WG507034
Ethylbenzene	mg/kg	0.0282	0.0292	113.	74-128	3.31	20	WG507034
Toluene	mg/kg	0.0278	0.0285	111.	70-120	2.53	20	WG507034
Total Xylenes	mg/kg	0.0867	0.0880	116.	74-127	1.52	20	WG507034
4-Bromofluorobenzene				102.0	59-140			WG507034
Dibromofluoromethane				97.76	63-139			WG507034
Toluene-d8				103.2	84-116			WG507034
a,a,a-Trifluorotoluene				110.4	80-118			WG507034
TPH (GC/FID) High Fraction	ppm	52.5	57.2	87.0	50-150	8.63	25	WG507106
o-Terphenyl				78.20	50-150			WG507106
Specific Conductance	umhos/	420.	420.	103.	85-115	0	20	WG507155
1-Methylnaphthalene	mg/kg	0.0311	0.0206	94.0	41-110	40.7*	24	WG507295
2-Chloronaphthalene	mg/kg	0.0323	0.0218	98.0	43-109	38.8*	21	WG507295
2-Methylnaphthalene	mg/kg	0.0309	0.0211	94.0	38-104	37.7*	24	WG507295
Acenaphthene	mg/kg	0.0321	0.0300	97.0	48-103	6.67	20	WG507295
Acenaphthylene	mg/kg	0.0307	0.0273	93.0	43-106	11.9	20	WG507295
Anthracene	mg/kg	0.0299	0.0274	90.0	51-110	8.49	22	WG507295
Benzo(a)anthracene	mg/kg	0.0270	0.0227	82.0	38-126	17.2	20	WG507295
Benzo(a)pyrene	mg/kg	0.0281	0.0250	85.0	47-118	11.9	20	WG507295
Benzo(b)fluoranthene	mg/kg	0.0285	0.0244	86.0	47-118	15.5	29	WG507295
Benzo(g,h,i)perylene	mg/kg	0.0313	0.0293	95.0	40-125	6.32	20	WG507295
Benzo(k)fluoranthene	mg/kg	0.0286	0.0265	87.0	45-121	7.65	31	WG507295
Chrysene	mg/kg	0.0295	0.0270	89.0	35-135	9.12	20	WG507295
Dibenz(a,h)anthracene	mg/kg	0.0325	0.0299	98.0	41-124	8.08	20	WG507295
Fluoranthene	mg/kg	0.0307	0.0289	93.0	50-114	6.01	20	WG507295
Fluorene	mg/kg	0.0302	0.0273	92.0	49-109	10.0	19	WG507295
Indeno(1,2,3-cd)pyrene	mg/kg	0.0319	0.0295	97.0	40-126	8.00	20	WG507295
Naphthalene	mg/kg	0.0296	0.0287	90.0	36-100	3.29	24	WG507295
Phenanthrene	mg/kg	0.0295	0.0240	89.0	46-108	20.4	21	WG507295
Pyrene	mg/kg	0.0292	0.0266	88.0	30-136	9.06	20	WG507295
2-Fluorobiphenyl				86.59	21-120			WG507295
Nitrobenzene-d5				98.04	33-114			WG507295
p-Terphenyl-d14				87.06	18-142			WG507295
Chromium,Hexavalent	mg/kg	92.1	97.6	92.0	50-143	5.80	20	WG507070

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
ORP	mV	220.	220.	96.0		95.6-104.37	0	20	WG507656
pH	su	6.90	6.90	100.		97.98-102.02	0	20	WG507596
Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch	
		MS Res	Ref Res	TV					
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	19.5	0.405	5.5	69.6	55-109	L487500-03	WG507045	
					80.86	59-128		WG507045	
Mercury	mg/kg	0.274	0.0360	.25	95.2	70-130	L487412-02	WG506986	
Benzene	mg/kg	0.0957	0	.025	76.5	16-143	L487273-04	WG507034	
Ethylbenzene	mg/kg	0.109	0	.025	87.3	12-137	L487273-04	WG507034	
Toluene	mg/kg	0.0921	0	.025	73.6	12-136	L487273-04	WG507034	
Total Xylenes	mg/kg	0.320	0	.075	85.3	10-138	L487273-04	WG507034	
TPH (GC/FID) High Fraction o-Terphenyl	ppm	71.3	7.00	60	107. 103.9	50-150 50-150	L487384-01	WG507106 WG507106	
Arsenic	mg/kg	40.0	3.80	50	72.4*	75-125	L487107-06	WG507248	
Barium	mg/kg	128.	110.	50	36.0*	75-125	L487107-06	WG507248	
Cadmium	mg/kg	38.1	0.140	50	75.9	75-125	L487107-06	WG507248	
Chromium	mg/kg	51.4	14.0	50	74.8*	75-125	L487107-06	WG507248	
Copper	mg/kg	47.4	10.4	50	74.0*	75-125	L487107-06	WG507248	
Lead	mg/kg	44.5	6.20	50	76.6	75-125	L487107-06	WG507248	
Nickel	mg/kg	47.0	12.2	50	69.6*	75-125	L487107-06	WG507248	
Selenium	mg/kg	44.2	10.0	50	68.4*	75-125	L487107-06	WG507248	
Silver	mg/kg	38.6	0	50	77.2	75-125	L487107-06	WG507248	
Zinc	mg/kg	66.4	35.2	50	62.4*	75-125	L487107-06	WG507248	
Chromium,Hexavalent	mg/kg	7.06	0	20	35.3*	50-150	L486688-06	WG507070	
1-Methylnaphthalene	mg/kg	0.0306	0	.033	92.8	19-131	L487516-17	WG507295	
2-Chloronapthalene	mg/kg	0.0286	0	.033	86.7	38-117	L487516-17	WG507295	
2-Methylnaphthalene	mg/kg	0.0253	0	.033	76.5	18-125	L487516-17	WG507295	
Acenaphthene	mg/kg	0.0277	0	.033	84.0	31-120	L487516-17	WG507295	
Acenaphthylene	mg/kg	0.0247	0	.033	74.8	34-116	L487516-17	WG507295	
Anthracene	mg/kg	0.0250	0	.033	75.9	32-131	L487516-17	WG507295	
Benzo(a)anthracene	mg/kg	0.0267	0	.033	81.0	32-131	L487516-17	WG507295	
Benzo(a)pyrene	mg/kg	0.0244	0	.033	73.9	28-130	L487516-17	WG507295	
Benzo(b)fluoranthene	mg/kg	0.0302	0	.033	91.4	37-130	L487516-17	WG507295	
Benzo(g,h,i)perylene	mg/kg	0.0135	0	.033	40.8	10-134	L487516-17	WG507295	
Benzo(k)fluoranthene	mg/kg	0.0271	0	.033	82.0	31-129	L487516-17	WG507295	
Chrysene	mg/kg	0.0238	0	.033	72.0	25-137	L487516-17	WG507295	
Dibenz(a,h)anthracene	mg/kg	0.0156	0	.033	47.2	20-134	L487516-17	WG507295	
Fluoranthene	mg/kg	0.0331	0	.033	100.	27-138	L487516-17	WG507295	
Fluorene	mg/kg	0.0282	0	.033	85.6	26-136	L487516-17	WG507295	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0160	0	.033	48.5	16-135	L487516-17	WG507295	
Napthalene	mg/kg	0.0304	0	.033	92.2	22-121	L487516-17	WG507295	
Phenanthrene	mg/kg	0.0266	0	.033	80.7	27-133	L487516-17	WG507295	
Pyrene	mg/kg	0.0202	0	.033	61.3	22-133	L487516-17	WG507295	

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch	
			Ref Res	TV					
2-Fluorobiphenyl					80.05	21-120			
Nitrobenzene-d5					74.65	33-114			
p-Terphenyl-d14					69.70	18-142			
Arsenic	mg/kg	69.7	17.0	10	105.	75-125	L487552-03	WG507613	
Arsenic	mg/kg	53.5	8.80	50	89.4	75-125	L487403-04	WG507473	
Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction	mg/kg	18.9	19.5	67.4	55-109	3.12	20	L487500-03	WG507045
a,a,a-Trifluorotoluene(FID)				80.39	59-128				WG507045
Mercury	mg/kg	0.261	0.274	90.0	70-130	4.86	20	L487412-02	WG506986
Benzene	mg/kg	0.108	0.0957	86.1	16-143	11.7	31	L487273-04	WG507034
Ethylbenzene	mg/kg	0.113	0.109	90.2	12-137	3.24	36	L487273-04	WG507034
Toluene	mg/kg	0.0998	0.0921	79.8	12-136	8.05	32	L487273-04	WG507034
Total Xylenes	mg/kg	0.332	0.320	88.4	10-138	3.60	36	L487273-04	WG507034
TPH (GC/FID) High Fraction	ppm	64.8	71.3	96.3	50-150	9.55	25	L487384-01	WG507106
o-Terphenyl				89.52	50-150				WG507106
Arsenic	mg/kg	44.6	40.0	81.6	75-125	10.9	20	L487107-06	WG507248
Barium	mg/kg	154.	128.	88.0	75-125	18.4	20	L487107-06	WG507248
Cadmium	mg/kg	42.6	38.1	84.9	75-125	11.2	20	L487107-06	WG507248
Chromium	mg/kg	58.9	51.4	89.8	75-125	13.6	20	L487107-06	WG507248
Copper	mg/kg	54.4	47.4	88.0	75-125	13.8	20	L487107-06	WG507248
Lead	mg/kg	49.6	44.5	86.8	75-125	10.8	20	L487107-06	WG507248
Nickel	mg/kg	53.6	47.0	82.8	75-125	13.1	20	L487107-06	WG507248
Selenium	mg/kg	49.8	44.2	79.6	75-125	11.9	20	L487107-06	WG507248
Silver	mg/kg	43.2	38.6	86.4	75-125	11.2	20	L487107-06	WG507248
Zinc	mg/kg	77.1	66.4	83.8	75-125	14.9	20	L487107-06	WG507248
Chromium,Hexavalent	mg/kg	5.80	7.06	29.0*	50-150	19.6	20	L486688-06	WG507070
1-Methylnaphthalene	mg/kg	0.0310	0.0306	93.9	19-131	1.17	30	L487516-17	WG507295
2-Chloronaphthalene	mg/kg	0.0293	0.0286	88.9	38-117	2.48	26	L487516-17	WG507295
2-Methylnaphthalene	mg/kg	0.0282	0.0253	85.3	18-125	10.9	29	L487516-17	WG507295
Acenaphthene	mg/kg	0.0293	0.0277	88.8	31-120	5.67	30	L487516-17	WG507295
Acenaphthylene	mg/kg	0.0280	0.0247	84.8	34-116	12.6	29	L487516-17	WG507295
Anthracene	mg/kg	0.0284	0.0250	86.2	32-131	12.7	26	L487516-17	WG507295
Benzo(a)anthracene	mg/kg	0.0287	0.0267	87.1	32-131	7.25	31	L487516-17	WG507295
Benzo(a)pyrene	mg/kg	0.0267	0.0244	80.9	28-130	9.08	28	L487516-17	WG507295
Benzo(b)fluoranthene	mg/kg	0.0350	0.0302	106.	37-130	14.7	41	L487516-17	WG507295
Benzo(g,h,i)perylene	mg/kg	0.0164	0.0135	49.6	10-134	19.3	26	L487516-17	WG507295
Benzo(k)fluoranthene	mg/kg	0.0290	0.0271	88.0	31-129	7.03	42	L487516-17	WG507295
Chrysene	mg/kg	0.0273	0.0238	82.8	25-137	13.9	22	L487516-17	WG507295
Dibenz(a,h)anthracene	mg/kg	0.0194	0.0156	58.9	20-134	22.1	25	L487516-17	WG507295
Fluoranthene	mg/kg	0.0370	0.0331	112.	27-138	11.2	35	L487516-17	WG507295
Fluorene	mg/kg	0.0304	0.0282	92.2	26-136	7.48	30	L487516-17	WG507295
Indeno(1,2,3-cd)pyrene	mg/kg	0.0191	0.0160	57.9	16-135	17.6	26	L487516-17	WG507295

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Naphthalene	mg/kg	0.0280	0.0304	84.8	22-121	8.35	30	L487516-17		WG507295
Phenanthrene	mg/kg	0.0322	0.0266	97.6	27-133	19.0	36	L487516-17		WG507295
Pyrene	mg/kg	0.0219	0.0202	66.5	22-133	8.15	33	L487516-17		WG507295
2-Fluorobiphenyl				88.89	21-120					WG507295
Nitrobenzene-d5				84.35	33-114					WG507295
p-Terphenyl-d14				77.47	18-142					WG507295
Arsenic	mg/kg	70.8	69.7	108.	75-125	1.57	20	L487552-03		WG507613
Arsenic	mg/kg	52.6	53.5	87.6	75-125	1.70	20	L487403-04		WG507473

Batch number /Run number / Sample number cross reference

WG507045: R1459910: L487403-06
WG506986: R1460489: L487403-06
WG507034: R1460629: L487403-06
WG507106: R1462030: L487403-06
WG507155: R1463009: L487403-06
WG507295: R1465130: L487403-06
WG507248: R1465329: L487403-06
WG507070: R1466669: L487403-06
WG507656: R1467109: L487403-06
WG507596: R1467269: L487403-06
WG507613: R1470069: L487403-05
WG507473: R1471789: L487403-01 02 03 04
WG507456: R1472853: L487403-06

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Chris Hines or Brad Kieding
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report
Level II

L487403

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

November 16, 2010

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

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

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

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



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Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

Report Summary

Monday August 29, 2011

Report Number: L532376

Samples Received: 08/23/11

Client Project:

Description: K8W Cuttings

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jayred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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

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REPORT OF ANALYSIS

Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

August 29, 2011

Date Received : August 23, 2011
Description : K8W Cuttings
Sample ID : K8W-CUT-082211
Collected By : Brennan Graff
Collection Date : 08/22/11 12:17

ESC Sample # : L532376-01

Site ID : K8W

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	10.	mg/kg	3060A/7196A	08/26/11	5
Chromium, Trivalent	12.	0.50	mg/kg	Calc.	08/24/11	1
ORP	-41.		mV	2580	08/24/11	1
pH	8.1		su	9045D	08/24/11	1
Sodium Adsorption Ratio	31.			Calc.	08/26/11	1
Specific Conductance	2000		umhos/cm	9050AMod	08/25/11	1
Mercury	BDL	0.020	mg/kg	7471	08/27/11	1
Arsenic	2.6	1.0	mg/kg	6010B	08/24/11	1
Barium	9200	1.2	mg/kg	6010B	08/24/11	5
Cadmium	0.34	0.25	mg/kg	6010B	08/24/11	1
Chromium	12.	0.50	mg/kg	6010B	08/24/11	1
Copper	14.	1.0	mg/kg	6010B	08/24/11	1
Lead	5.4	0.25	mg/kg	6010B	08/24/11	1
Nickel	7.1	1.0	mg/kg	6010B	08/24/11	1
Selenium	1.4	1.0	mg/kg	6010B	08/24/11	1
Silver	1.6	0.50	mg/kg	6010B	08/24/11	1
Zinc	27.	1.5	mg/kg	6010B	08/24/11	1
Benzene	0.0060	0.0025	mg/kg	8021/8015	08/24/11	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/24/11	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/24/11	5
Total Xylene	0.025	0.0075	mg/kg	8021/8015	08/24/11	5
TPH (GC/FID) Low Fraction	3.5	0.50	mg/kg	GRO	08/24/11	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	89.6		% Rec.	8021/8015	08/24/11	5
a,a,a-Trifluorotoluene(PID)	90.8		% Rec.	8021/8015	08/24/11	5
TPH (GC/FID) High Fraction	69.	4.0	mg/kg	3546/DRO	08/25/11	1
Surrogate recovery(%)						
o-Terphenyl	50.1		% Rec.	3546/DRO	08/25/11	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Acenaphthene	0.0063	0.0060	mg/kg	8270C-SIM	08/24/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

L532376-01 (PH) - 8.1@21.7c

L532376-01 (CR6) - diluted due to cloudy once acid and color reagent added



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REPORT OF ANALYSIS

Chris Hines / Jake Harris
EnCana Oil & Gas Inc. - CO
2717 County Road 215, Suite 100
Parachute, CO 81635

August 29, 2011

Date Received : August 23, 2011
Description : K8W Cuttings

Sample ID : K8W-CUT-082211

Collected By : Brennan Graff
Collection Date : 08/22/11 12:17

ESC Sample # : L532376-01

Site ID : K8W

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Fluorene	0.019	0.0060	mg/kg	8270C-SIM	08/24/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Naphthalene	0.053	0.0060	mg/kg	8270C-SIM	08/24/11	1
Phenanthrene	0.035	0.0060	mg/kg	8270C-SIM	08/24/11	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
1-Methylnaphthalene	0.049	0.0060	mg/kg	8270C-SIM	08/24/11	1
2-Methylnaphthalene	0.12	0.0060	mg/kg	8270C-SIM	08/24/11	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/24/11	1
Surrogate Recovery						
Nitrobenzene-d5	122.		% Rec.	8270C-SIM	08/24/11	1
2-Fluorobiphenyl	62.7		% Rec.	8270C-SIM	08/24/11	1
p-Terphenyl-d14	13.8		% Rec.	8270C-SIM	08/24/11	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: 08/29/11 14:16 Printed: 08/29/11 14:16

L532376-01 (PH) - 8.1@21.7c

L532376-01 (CR6) - diluted due to cloudy once acid and color reagent added

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L532376-01	WG551726	SAMP	p-Terphenyl-d14	R1827411	J2
	WG551502	SAMP	Chromium, Hexavalent	R1831414	O

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
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.

Summary of Remarks For Samples Printed
08/29/11 at 14:16:53

TSR Signing Reports: 358
R5 - Desired TAT

Sample: L532376-01 Account: ENCANACO Received: 08/23/11 09:00 Due Date: 08/30/11 00:00 RPT Date: 08/29/11 14:16



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August 29, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
pH	5.00	su			WG551872	08/24/11 13:06
1-Methylnaphthalene	< .006	mg/kg			WG551726	08/24/11 14:03
2-Chloronaphthalene	< .006	mg/kg			WG551726	08/24/11 14:03
2-Methylnaphthalene	< .006	mg/kg			WG551726	08/24/11 14:03
Acenaphthene	< .006	mg/kg			WG551726	08/24/11 14:03
Acenaphthylene	< .006	mg/kg			WG551726	08/24/11 14:03
Anthracene	< .006	mg/kg			WG551726	08/24/11 14:03
Benzo(a)anthracene	< .006	mg/kg			WG551726	08/24/11 14:03
Benzo(a)pyrene	< .006	mg/kg			WG551726	08/24/11 14:03
Benzo(b)fluoranthene	< .006	mg/kg			WG551726	08/24/11 14:03
Benzo(g,h,i)perylene	< .006	mg/kg			WG551726	08/24/11 14:03
Benzo(k)fluoranthene	< .006	mg/kg			WG551726	08/24/11 14:03
Chrysene	< .006	mg/kg			WG551726	08/24/11 14:03
Dibenz(a,h)anthracene	< .006	mg/kg			WG551726	08/24/11 14:03
Fluoranthene	< .006	mg/kg			WG551726	08/24/11 14:03
Fluorene	< .006	mg/kg			WG551726	08/24/11 14:03
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG551726	08/24/11 14:03
Naphthalene	< .006	mg/kg			WG551726	08/24/11 14:03
Phenanthrene	< .006	mg/kg			WG551726	08/24/11 14:03
Pyrene	< .006	mg/kg			WG551726	08/24/11 14:03
2-Fluorobiphenyl		% Rec.	82.33	34-129	WG551726	08/24/11 14:03
Nitrobenzene-d5		% Rec.	72.94	14-141	WG551726	08/24/11 14:03
p-Terphenyl-d14		% Rec.	85.41	25-139	WG551726	08/24/11 14:03
Arsenic	< 1	mg/kg			WG551844	08/24/11 15:24
Barium	< .25	mg/kg			WG551844	08/24/11 15:24
Cadmium	< .25	mg/kg			WG551844	08/24/11 15:24
Chromium	< .5	mg/kg			WG551844	08/24/11 15:24
Copper	< 1	mg/kg			WG551844	08/24/11 15:24
Nickel	< 1	mg/kg			WG551844	08/24/11 15:24
Selenium	< 1	mg/kg			WG551844	08/24/11 15:24
Silver	< .5	mg/kg			WG551844	08/24/11 15:24
Zinc	< 1.5	mg/kg			WG551844	08/24/11 15:24
Lead	< .25	mg/kg			WG551844	08/24/11 13:13
Benzene	< .0005	mg/kg			WG551834	08/24/11 11:47
Ethylbenzene	< .0005	mg/kg			WG551834	08/24/11 11:47
Toluene	< .005	mg/kg			WG551834	08/24/11 11:47
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG551834	08/24/11 11:47
Total Xylene	< .0015	mg/kg			WG551834	08/24/11 11:47
a,a,a-Trifluorotoluene(FID)		% Rec.	86.02	59-128	WG551834	08/24/11 11:47
a,a,a-Trifluorotoluene(PID)		% Rec.	85.69	54-144	WG551834	08/24/11 11:47
TPH (GC/FID) High Fraction	< 4	ppm			WG551814	08/24/11 21:41
o-Terphenyl		% Rec.	76.78	50-150	WG551814	08/24/11 21:41
Specific Conductance	1.40	umhos/cm			WG552083	08/25/11 15:59
Chromium,Hexavalent	< 2	mg/kg			WG551502	08/26/11 13:46
Mercury	< .02	mg/kg			WG551913	08/27/11 11:09

* 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

August 29, 2011

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
pH	su	7.30	7.30		0	1	L532351-01	WG551872
ORP	mV	19.0	25.0		27.3*	20	L532064-01	WG551861
Arsenic	mg/kg	1.70	1.80		3.39	20	L532421-04	WG551844
Barium	mg/kg	180.	170.		2.90	20	L532421-04	WG551844
Cadmium	mg/kg	0.280	0		NA	20	L532421-04	WG551844
Chromium	mg/kg	12.0	13.0		7.17	20	L532421-04	WG551844
Copper	mg/kg	14.0	14.2		2.86	20	L532421-04	WG551844
Lead	mg/kg	9.20	9.00		1.76	20	L532421-04	WG551844
Nickel	mg/kg	9.00	9.10		1.66	20	L532421-04	WG551844
Selenium	mg/kg	3.20	3.20		1.57	20	L532421-04	WG551844
Silver	mg/kg	1.80	1.40		25.5*	20	L532421-04	WG551844
Zinc	mg/kg	51.0	49.0		4.00	20	L532421-04	WG551844
Specific Conductance	umhos/cm	260.	270.		5.60	20	L532060-01	WG552083
Specific Conductance	umhos/cm	2300	2000		14.3	20	L532660-01	WG552083
Chromium,Hexavalent	mg/kg	0	0		0	20	L532256-04	WG551502
Chromium,Hexavalent	mg/kg	0	0		0	20	L532701-01	WG551502
Mercury	mg/kg	0	0		0	20	L532426-02	WG551913

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
pH	su	9.04	8.90	98.5	98-101	WG551872
ORP	mV	229	220.	96.1	95.6-104.37	WG551861
1-Methylnaphthalene	mg/kg	.033	0.0302	91.6	48-113	WG551726
2-Chloronaphthalene	mg/kg	.033	0.0287	86.8	51-114	WG551726
2-Methylnaphthalene	mg/kg	.033	0.0267	80.9	44-109	WG551726
Acenaphthene	mg/kg	.033	0.0300	90.9	52-108	WG551726
Acenaphthylene	mg/kg	.033	0.0259	78.6	51-110	WG551726
Anthracene	mg/kg	.033	0.0297	90.1	58-120	WG551726
Benzo(a)anthracene	mg/kg	.033	0.0258	78.1	54-110	WG551726
Benzo(a)pyrene	mg/kg	.033	0.0286	86.8	56-118	WG551726
Benzo(b)fluoranthene	mg/kg	.033	0.0295	89.3	55-114	WG551726
Benzo(g,h,i)perylene	mg/kg	.033	0.0286	86.5	48-130	WG551726
Benzo(k)fluoranthene	mg/kg	.033	0.0334	101.	55-122	WG551726
Chrysene	mg/kg	.033	0.0311	94.3	57-118	WG551726
Dibenz(a,h)anthracene	mg/kg	.033	0.0287	87.0	53-122	WG551726
Fluoranthene	mg/kg	.033	0.0304	92.1	58-118	WG551726
Fluorene	mg/kg	.033	0.0286	86.8	54-109	WG551726
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0285	86.2	51-125	WG551726
Naphthalene	mg/kg	.033	0.0275	83.5	45-105	WG551726
Phenanthrene	mg/kg	.033	0.0266	80.8	53-114	WG551726
Pyrene	mg/kg	.033	0.0281	85.2	53-121	WG551726
2-Fluorobiphenyl				88.34	34-129	WG551726
Nitrobenzene-d5				81.26	14-141	WG551726
p-Terphenyl-d14				89.62	25-139	WG551726

* 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 29, 2011

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	92.6	94.5	102.	82.9-117	WG551844
Barium	mg/kg	169	176.	104.	82.8-117	WG551844
Cadmium	mg/kg	61.8	59.3	96.0	83.3-117	WG551844
Chromium	mg/kg	71.3	71.0	99.6	81.8-118	WG551844
Copper	mg/kg	81.2	84.8	104.	83.9-116	WG551844
Lead	mg/kg	92.4	95.2	103.	83.3-117	WG551844
Nickel	mg/kg	59.1	55.3	93.6	83.8-116	WG551844
Selenium	mg/kg	89.5	94.4	105.	79-121	WG551844
Silver	mg/kg	34.4	35.3	103.	66.3-134	WG551844
Zinc	mg/kg	141	147.	104.	80.9-119	WG551844
Benzene	mg/kg	.05	0.0495	99.1	76-113	WG551834
Ethylbenzene	mg/kg	.05	0.0539	108.	78-115	WG551834
Toluene	mg/kg	.05	0.0525	105.	76-114	WG551834
Total Xylene	mg/kg	.15	0.159	106.	81-118	WG551834
a,a,a-Trifluorotoluene(PID)				99.88	54-144	WG551834
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.99	127.	67-135	WG551834
a,a,a-Trifluorotoluene(FID)				103.5	59-128	WG551834
TPH (GC/FID) High Fraction	ppm	60	53.1	88.5	50-150	WG551814
o-Terphenyl				74.00	50-150	WG551814
Specific Conductance	umhos/cm	427	430.	101.	85-115	WG552083
Chromium,Hexavalent	mg/kg	132	104.	78.8	50-150	WG551502
Mercury	mg/kg	3.77	4.42	117.	71.6-128	WG551913

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
pH	su	8.90	8.90	98.0	98-101	0	20	WG551872
ORP	mV	220.	220.	96.0	95.6-104.37	0	20	WG551861
1-Methylnaphthalene	mg/kg	0.0291	0.0302	88.0	48-113	3.67	24	WG551726
2-Chloronaphthalene	mg/kg	0.0280	0.0287	85.0	51-114	2.16	24	WG551726
2-Methylnaphthalene	mg/kg	0.0259	0.0267	78.0	44-109	2.88	24	WG551726
Acenaphthene	mg/kg	0.0284	0.0300	86.0	52-108	5.63	22	WG551726
Acenaphthylene	mg/kg	0.0251	0.0259	76.0	51-110	3.29	21	WG551726
Anthracene	mg/kg	0.0281	0.0297	85.0	58-120	5.57	20	WG551726
Benzo(a)anthracene	mg/kg	0.0231	0.0258	70.0	54-110	10.8	22	WG551726
Benzo(a)pyrene	mg/kg	0.0267	0.0286	81.0	56-118	7.12	21	WG551726
Benzo(b)fluoranthene	mg/kg	0.0253	0.0295	77.0	55-114	15.1	20	WG551726
Benzo(g,h,i)perylene	mg/kg	0.0267	0.0286	81.0	48-130	6.59	20	WG551726
Benzo(k)fluoranthene	mg/kg	0.0304	0.0334	92.0	55-122	9.29	25	WG551726
Chrysene	mg/kg	0.0293	0.0311	89.0	57-118	6.17	20	WG551726
Dibenz(a,h)anthracene	mg/kg	0.0263	0.0287	80.0	53-122	8.63	20	WG551726
Fluoranthene	mg/kg	0.0276	0.0304	84.0	58-118	9.52	20	WG551726
Fluorene	mg/kg	0.0273	0.0286	83.0	54-109	4.84	20	WG551726
Indeno(1,2,3-cd)pyrene	mg/kg	0.0266	0.0285	81.0	51-125	6.62	21	WG551726
Naphthalene	mg/kg	0.0277	0.0275	84.0	45-105	0.571	24	WG551726

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Phenanthrene	mg/kg	0.0254	0.0266	77.0	53-114	4.88	20	WG551726
Pyrene	mg/kg	0.0257	0.0281	78.0	53-121	8.93	20	WG551726
2-Fluorobiphenyl				84.80	34-129			WG551726
Nitrobenzene-d5				74.72	14-141			WG551726
p-Terphenyl-d14				83.31	25-139			WG551726
Benzene	mg/kg	0.0505	0.0495	101.	76-113	1.90	20	WG551834
Ethylbenzene	mg/kg	0.0549	0.0539	110.	78-115	1.88	20	WG551834
Toluene	mg/kg	0.0533	0.0525	106.	76-114	1.48	20	WG551834
Total Xylene	mg/kg	0.162	0.159	108.	81-118	1.79	20	WG551834
a,a,a-Trifluorotoluene(PID)				100.3	54-144			WG551834
TPH (GC/FID) Low Fraction	mg/kg	7.09	6.99	129.	67-135	1.43	20	WG551834
a,a,a-Trifluorotoluene(FID)				103.4	59-128			WG551834
TPH (GC/FID) High Fraction	ppm	49.2	53.1	82.0	50-150	7.65	20	WG551814
o-Terphenyl				68.18	50-150			WG551814
Specific Conductance	umhos/	430.	430.	101.	85-115	0	20	WG552083
Chromium, Hexavalent	mg/kg	110.	104.	83.0	50-150	5.61	20	WG551502

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Arsenic	mg/kg	49.6	1.80	50	95.6	75-125	L532421-04	WG551844
Barium	mg/kg	242.	170.	50	144.*	75-125	L532421-04	WG551844
Cadmium	mg/kg	46.9	0	50	93.8	75-125	L532421-04	WG551844
Chromium	mg/kg	61.2	13.0	50	96.4	75-125	L532421-04	WG551844
Copper	mg/kg	63.2	14.2	50	98.0	75-125	L532421-04	WG551844
Lead	mg/kg	58.7	9.00	50	99.4	75-125	L532421-04	WG551844
Nickel	mg/kg	53.8	9.10	50	89.4	75-125	L532421-04	WG551844
Selenium	mg/kg	48.5	3.20	50	90.6	75-125	L532421-04	WG551844
Silver	mg/kg	47.6	1.40	50	92.4	75-125	L532421-04	WG551844
Zinc	mg/kg	102.	49.0	50	106.	75-125	L532421-04	WG551844
1-Methylnaphthalene	mg/kg	0.0237	0	.033	71.8	25-155	L532290-01	WG551726
2-Chloronaphthalene	mg/kg	0.0263	0	.033	79.6	31-153	L532290-01	WG551726
2-Methylnaphthalene	mg/kg	0.0239	0.000920	.033	69.7	22-172	L532290-01	WG551726
Acenaphthene	mg/kg	0.0279	0.000810	.033	82.0	43-133	L532290-01	WG551726
Acenaphthylene	mg/kg	0.0265	0	.033	80.4	42-146	L532290-01	WG551726
Anthracene	mg/kg	0.0274	0	.033	83.0	38-153	L532290-01	WG551726
Benzo(a)anthracene	mg/kg	0.0280	0	.033	84.8	31-142	L532290-01	WG551726
Benzo(a)pyrene	mg/kg	0.0271	0	.033	82.0	26-152	L532290-01	WG551726
Benzo(b)fluoranthene	mg/kg	0.0263	0	.033	79.7	10-188	L532290-01	WG551726
Benzo(g,h,i)perylene	mg/kg	0.0321	0	.033	97.4	10-176	L532290-01	WG551726
Benzo(k)fluoranthene	mg/kg	0.0263	0	.033	79.7	22-163	L532290-01	WG551726
Chrysene	mg/kg	0.0268	0	.033	81.2	26-146	L532290-01	WG551726
Dibenz(a,h)anthracene	mg/kg	0.0312	0	.033	94.5	10-160	L532290-01	WG551726
Fluoranthene	mg/kg	0.0306	0	.033	92.7	23-160	L532290-01	WG551726
Fluorene	mg/kg	0.0284	0	.033	86.1	44-143	L532290-01	WG551726
Indeno(1,2,3-cd)pyrene	mg/kg	0.0319	0	.033	96.8	10-157	L532290-01	WG551726
Naphthalene	mg/kg	0.0258	0	.033	78.2	22-156	L532290-01	WG551726
Phenanthrene	mg/kg	0.0284	0.00200	.033	80.1	23-164	L532290-01	WG551726
Pyrene	mg/kg	0.0258	0	.033	78.3	12-170	L532290-01	WG551726

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Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref	Res					
2-Fluorobiphenyl						86.10	34-129		
Nitrobenzene-d5						91.12	14-141		
p-Terphenyl-d14						94.82	25-139		
Benzene	mg/kg	0.189	0		.05	75.7	32-137	L532426-01	WG551834
Ethylbenzene	mg/kg	0.170	0		.05	67.8	10-150	L532426-01	WG551834
Toluene	mg/kg	0.186	0		.05	74.6	20-142	L532426-01	WG551834
Total Xylene	mg/kg	0.502	0		.15	66.9	16-141	L532426-01	WG551834
a,a,a-Trifluorotoluene(PID)						97.24	54-144		WG551834
TPH (GC/FID) Low Fraction	mg/kg	20.3	0		5.5	73.7	55-109	L532426-01	WG551834
a,a,a-Trifluorotoluene(FID)						94.38	59-128		WG551834
TPH (GC/FID) High Fraction	ppm	40.9	1.55		60	65.6	50-150	L532426-06	WG551814
o-Terphenyl						64.04	50-150		WG551814
Chromium,Hexavalent	mg/kg	13.6	0		20	68.0	50-150	L532060-01	WG551502
Mercury	mg/kg	0.298	0		.25	119.	70-130	L532426-02	WG551913

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	51.7	49.6	99.8	75-125	4.15	20	L532421-04	WG551844
Barium	mg/kg	255.	242.	170.*	75-125	5.23	20	L532421-04	WG551844
Cadmium	mg/kg	48.4	46.9	96.8	75-125	3.15	20	L532421-04	WG551844
Chromium	mg/kg	63.3	61.2	101.	75-125	3.37	20	L532421-04	WG551844
Copper	mg/kg	66.1	63.2	104.	75-125	4.49	20	L532421-04	WG551844
Lead	mg/kg	60.8	58.7	104.	75-125	3.51	20	L532421-04	WG551844
Nickel	mg/kg	55.3	53.8	92.4	75-125	2.75	20	L532421-04	WG551844
Selenium	mg/kg	50.4	48.5	94.4	75-125	3.84	20	L532421-04	WG551844
Silver	mg/kg	49.1	47.6	95.4	75-125	3.10	20	L532421-04	WG551844
Zinc	mg/kg	105.	102.	112.	75-125	2.90	20	L532421-04	WG551844
1-Methylnaphthalene	mg/kg	0.0249	0.0237	75.6	25-155	5.17	27	L532290-01	WG551726
2-Chloronaphthalene	mg/kg	0.0254	0.0263	76.9	31-153	3.53	22	L532290-01	WG551726
2-Methylnaphthalene	mg/kg	0.0321	0.0239	94.4	22-172	29.1*	29	L532290-01	WG551726
Acenaphthene	mg/kg	0.0305	0.0279	90.0	43-133	9.07	26	L532290-01	WG551726
Acenaphthylene	mg/kg	0.0288	0.0265	87.2	42-146	8.05	22	L532290-01	WG551726
Anthracene	mg/kg	0.0279	0.0274	84.5	38-153	1.83	27	L532290-01	WG551726
Benzo(a)anthracene	mg/kg	0.0292	0.0280	88.4	31-142	4.09	31	L532290-01	WG551726
Benzo(a)pyrene	mg/kg	0.0286	0.0271	86.5	26-152	5.32	32	L532290-01	WG551726
Benzo(b)fluoranthene	mg/kg	0.0283	0.0263	85.6	10-188	7.13	33	L532290-01	WG551726
Benzo(g,h,i)perylene	mg/kg	0.0345	0.0321	105.	10-176	7.24	30	L532290-01	WG551726
Benzo(k)fluoranthene	mg/kg	0.0276	0.0263	83.6	22-163	4.78	29	L532290-01	WG551726
Chrysene	mg/kg	0.0283	0.0268	85.9	26-146	5.56	30	L532290-01	WG551726
Dibenz(a,h)anthracene	mg/kg	0.0337	0.0312	102.	10-160	7.88	39	L532290-01	WG551726
Fluoranthene	mg/kg	0.0317	0.0306	96.0	23-160	3.51	22	L532290-01	WG551726
Fluorene	mg/kg	0.0308	0.0284	93.3	44-143	8.01	23	L532290-01	WG551726
Indeno(1,2,3-cd)pyrene	mg/kg	0.0347	0.0319	105.	10-157	8.29	40	L532290-01	WG551726
Naphthalene	mg/kg	0.0266	0.0258	80.5	22-156	2.87	27	L532290-01	WG551726
Phenanthrene	mg/kg	0.0310	0.0284	87.8	23-164	8.56	25	L532290-01	WG551726
Pyrene	mg/kg	0.0277	0.0258	83.8	12-170	6.77	24	L532290-01	WG551726
2-Fluorobiphenyl				82.35	34-129				WG551726
Nitrobenzene-d5				77.97	14-141				WG551726
p-Terphenyl-d14				95.75	25-139				WG551726

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.210	0.189	83.9	32-137	10.2	39	L532426-01	WG551834
Ethylbenzene	mg/kg	0.185	0.170	74.1	10-150	8.88	44	L532426-01	WG551834
Toluene	mg/kg	0.201	0.186	80.4	20-142	7.50	42	L532426-01	WG551834
Total Xylene	mg/kg	0.541	0.502	72.1	16-141	7.40	46	L532426-01	WG551834
a,a,a-Trifluorotoluene(PID)				95.92	54-144				WG551834
TPH (GC/FID) Low Fraction	mg/kg	28.1	20.3	102.	55-109	32.5*	20	L532426-01	WG551834
a,a,a-Trifluorotoluene(FID)				92.63	59-128				WG551834
TPH (GC/FID) High Fraction	ppm	46.8	40.9	75.4	50-150	13.4	20	L532426-06	WG551814
o-Terphenyl				70.62	50-150				WG551814
Chromium,Hexavalent	mg/kg	13.8	13.6	69.0	50-150	1.46	20	L532060-01	WG551502
Mercury	mg/kg	0.336	0.298	134.*	70-130	12.0	20	L532426-02	WG551913

Batch number /Run number / Sample number cross reference

WG551872: R1827031: L532376-01
WG551861: R1827390: L532376-01
WG551726: R1827411: L532376-01
WG551844: R1827510: L532376-01
WG551834: R1828490: L532376-01
WG551814: R1828511: L532376-01
WG552083: R1829151: L532376-01
WG551502: R1831414: L532376-01
WG551913: R1833332: L532376-01
WG552294: R1834354: L532376-01

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

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

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

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

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