

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

Location	Sample Date:	Sample Matrix	Matrix Notes	Organic Compounds in Soil (mg/kg [ppm])																			Inorganics in Soil			Metals in Soil (mg/kg [ppm])												
				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			
A10E	08/11/11	Cuttings		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-C,D)pyrene	Naphthalene	Pyrene	EC (<4 mmphos/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
				96.6	2.6	94	BDL	BDL	BDL	0.0077	0.01	BDL	BDL	BDL	BDL	BDL	0.012	BDL	BDL	0.031	BDL	0.11	0.01	1.5	28	8.6	1.9	5600	0.26	7.2	BDL	12	6.1	0.021	1.4	BDL	BDL	35



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Tax I.D. 62-0814289

Est. 1970

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

### Report Summary

Wednesday August 17, 2011

Report Number: L530746


Samples Received: 08/12/11

Client Project:

Description: A10E 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:

  
Jared 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 17, 2011

Date Received : August 12, 2011  
 Description : A10E Cuttings  
 Sample ID : A10E-CUT-081111  
 Collected By : Brennan Graff  
 Collection Date : 08/11/11 09:02

ESC Sample # : L530746-01  
 Site ID : A10E  
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	08/13/11	1
Chromium,Trivalent	7.2	0.50	mg/kg	Calc.	08/14/11	1
ORP	50.		mV	2580	08/16/11	1
pH	8.6		su	9045D	08/13/11	1
Sodium Adsorption Ratio	28.			Calc.	08/14/11	1
Specific Conductance	1500		umhos/cm	9050AMod	08/15/11	1
Mercury	0.021	0.020	mg/kg	7471	08/15/11	1
Arsenic	1.9	1.0	mg/kg	6010B	08/14/11	1
Barium	5600	1.2	mg/kg	6010B	08/15/11	5
Cadmium	0.26	0.25	mg/kg	6010B	08/14/11	1
Chromium	7.2	0.50	mg/kg	6010B	08/14/11	1
Copper	12.	1.0	mg/kg	6010B	08/14/11	1
Lead	6.1	0.25	mg/kg	6010B	08/14/11	1
Nickel	1.4	1.0	mg/kg	6010B	08/14/11	1
Selenium	BDL	1.0	mg/kg	6010B	08/14/11	1
Silver	BDL	0.50	mg/kg	6010B	08/14/11	1
Zinc	35.	1.5	mg/kg	6010B	08/14/11	1
Benzene	BDL	0.0025	mg/kg	8021/8015	08/12/11	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/12/11	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/12/11	5
Total Xylene	0.0077	0.0075	mg/kg	8021/8015	08/12/11	5
TPH (GC/FID) Low Fraction	2.6	0.50	mg/kg	GRO	08/12/11	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	95.8		% Rec.	8021/8015	08/12/11	5
a,a,a-Trifluorotoluene(PID)	94.5		% Rec.	8021/8015	08/12/11	5
TPH (GC/FID) High Fraction	94.	4.0	mg/kg	3546/DRO	08/14/11	1
Surrogate recovery(%)						
o-Terphenyl	73.7		% Rec.	3546/DRO	08/14/11	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/14/11	1
Acenaphthene	0.010	0.0060	mg/kg	8270C-SIM	08/14/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	08/14/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/14/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/14/11	1

BDL - Below Detection Limit  
 Det. Limit - Practical Quantitation Limit(PQL)  
 L530746-01 (PH) - 8.6@20.4c



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Parachute, CO 81635

ESC Sample # : L530746-01

Date Received : August 12, 2011
Description : A10E Cuttings

Site ID : A10E

Sample ID : A10E-CUT-081111

Project # :

Collected By : Brennan Graff
Collection Date : 08/11/11 09:02

Table with 7 columns: Parameter, Result, Det. Limit, Units, Method, Date, Dil. Rows include various polycyclic aromatic hydrocarbons (PAHs) and surrogate recovery results.

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: 08/17/11 09:49 Printed: 08/17/11 09:50
L530746-01 (PH) - 8.6@20.4c

Summary of Remarks For Samples Printed  
08/17/11 at 09:50:04

TSR Signing Reports: 358  
R4 - Rush: Three Day

If COC says TPH, then please log for GRO and DRO.

Sample: L530746-01 Account: ENCANACO Received: 08/12/11 09:00 Due Date: 08/17/11 00:00 RPT Date: 08/17/11 09:49



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Chromium,Hexavalent	< 2	mg/kg			WG550365	08/13/11 14:09
Arsenic	< 1	mg/kg			WG550238	08/14/11 15:10
Barium	< .25	mg/kg			WG550238	08/14/11 15:10
Cadmium	< .25	mg/kg			WG550238	08/14/11 15:10
Chromium	< .5	mg/kg			WG550238	08/14/11 15:10
Copper	< 1	mg/kg			WG550238	08/14/11 15:10
Lead	< .25	mg/kg			WG550238	08/14/11 15:10
Nickel	< 1	mg/kg			WG550238	08/14/11 15:10
Selenium	< 1	mg/kg			WG550238	08/14/11 15:10
Silver	< .5	mg/kg			WG550238	08/14/11 15:10
Zinc	< 1.5	mg/kg			WG550238	08/14/11 15:10
pH	4.90	su			WG550287	08/13/11 23:06
Benzene	< .0005	mg/kg			WG550217	08/12/11 17:40
Ethylbenzene	< .0005	mg/kg			WG550217	08/12/11 17:40
Toluene	< .005	mg/kg			WG550217	08/12/11 17:40
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG550217	08/12/11 17:40
Total Xylene	< .0015	mg/kg			WG550217	08/12/11 17:40
a,a,a-Trifluorotoluene(FID)		% Rec.	101.0	59-128	WG550217	08/12/11 17:40
a,a,a-Trifluorotoluene(PID)		% Rec.	100.2	54-144	WG550217	08/12/11 17:40
TPH (GC/FID) High Fraction	< 4	ppm			WG550355	08/14/11 06:25
o-Terphenyl		% Rec.	79.50	50-150	WG550355	08/14/11 06:25
Mercury	< .02	mg/kg			WG550273	08/15/11 01:23
Specific Conductance	2.40	umhos/cm			WG550385	08/15/11 12:25
1-Methylnaphthalene	< .006	mg/kg			WG550363	08/14/11 11:00
2-Chloronaphthalene	< .006	mg/kg			WG550363	08/14/11 11:00
2-Methylnaphthalene	< .006	mg/kg			WG550363	08/14/11 11:00
Acenaphthene	< .006	mg/kg			WG550363	08/14/11 11:00
Acenaphthylene	< .006	mg/kg			WG550363	08/14/11 11:00
Anthracene	< .006	mg/kg			WG550363	08/14/11 11:00
Benzo(a)anthracene	< .006	mg/kg			WG550363	08/14/11 11:00
Benzo(a)pyrene	< .006	mg/kg			WG550363	08/14/11 11:00
Benzo(b)fluoranthene	< .006	mg/kg			WG550363	08/14/11 11:00
Benzo(g,h,i)perylene	< .006	mg/kg			WG550363	08/14/11 11:00
Benzo(k)fluoranthene	< .006	mg/kg			WG550363	08/14/11 11:00
Chrysene	< .006	mg/kg			WG550363	08/14/11 11:00
Dibenz(a,h)anthracene	< .006	mg/kg			WG550363	08/14/11 11:00
Fluoranthene	< .006	mg/kg			WG550363	08/14/11 11:00
Fluorene	< .006	mg/kg			WG550363	08/14/11 11:00
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG550363	08/14/11 11:00
Naphthalene	< .006	mg/kg			WG550363	08/14/11 11:00
Phenanthrene	< .006	mg/kg			WG550363	08/14/11 11:00
Pyrene	< .006	mg/kg			WG550363	08/14/11 11:00
2-Fluorobiphenyl		% Rec.	60.87	34-129	WG550363	08/14/11 11:00
Nitrobenzene-d5		% Rec.	52.91	14-141	WG550363	08/14/11 11:00
p-Terphenyl-d14		% Rec.	69.02	25-139	WG550363	08/14/11 11:00

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

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



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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Chromium,Hexavalent	mg/kg	0	0	0	20	L530653-02	WG550365
Arsenic	mg/kg	3.20	3.60	11.5	20	L530591-32	WG550238
Barium	mg/kg	110.	128.	17.9	20	L530591-32	WG550238
Cadmium	mg/kg	0	0	0	20	L530591-32	WG550238
Chromium	mg/kg	19.0	16.0	17.7	20	L530591-32	WG550238
Copper	mg/kg	14.0	12.4	14.9	20	L530591-32	WG550238
Lead	mg/kg	13.0	13.0	2.28	20	L530591-32	WG550238
Nickel	mg/kg	18.0	19.3	6.97	20	L530591-32	WG550238
Selenium	mg/kg	0	1.24	NA	20	L530591-32	WG550238
Silver	mg/kg	0.890	0.730	19.4	20	L530591-32	WG550238
Zinc	mg/kg	57.0	81.7	34.9*	20	L530591-32	WG550238
pH	su	7.00	7.00	0	1	L530653-02	WG550287
Mercury	mg/kg	0.0960	0.0770	22.5*	20	L530757-01	WG550273
Specific Conductance	umhos/cm	190.	220.	14.6	20	L530683-01	WG550385
Specific Conductance	umhos/cm	2600	2300	12.2	20	L531042-55	WG550385
ORP	mV	55.0	58.0	5.31	20	L531047-01	WG550622

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chromium,Hexavalent	mg/kg	132	105.	79.5	50-150	WG550365
Arsenic	mg/kg	192	173.	90.1	78.6-120.8	WG550238
Barium	mg/kg	420	401.	95.5	78.8-121.4	WG550238
Cadmium	mg/kg	70.1	62.4	89.0	78.5-121.5	WG550238
Chromium	mg/kg	168	163.	97.0	80.4-120.2	WG550238
Copper	mg/kg	122	121.	99.2	81.6-119.7	WG550238
Lead	mg/kg	113	110.	97.3	77.3-122.1	WG550238
Nickel	mg/kg	74.1	71.0	95.8	78.8-121.2	WG550238
Selenium	mg/kg	176	160.	90.9	75.6-125.0	WG550238
Silver	mg/kg	115	112.	97.4	66-133.9	WG550238
Zinc	mg/kg	437	418.	95.7	78.5-121.7	WG550238
pH	su	9.04	8.90	98.5	98-101	WG550287
Benzene	mg/kg	.05	0.0493	98.6	76-113	WG550217
Ethylbenzene	mg/kg	.05	0.0540	108.	78-115	WG550217
Toluene	mg/kg	.05	0.0525	105.	76-114	WG550217
Total Xylene	mg/kg	.15	0.159	106.	81-118	WG550217
a,a,a-Trifluorotoluene(FID)				98.20	59-128	WG550217
a,a,a-Trifluorotoluene(PID)				100.5	54-144	WG550217
TPH (GC/FID) Low Fraction	mg/kg	5.5	6.92	126.	67-135	WG550217
a,a,a-Trifluorotoluene(FID)				102.1	59-128	WG550217
a,a,a-Trifluorotoluene(PID)				104.4	54-144	WG550217

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	ppm	60	56.4	94.0	50-150	WG550355
o-Terphenyl				86.08	50-150	WG550355
Mercury	mg/kg	8.77	9.47	108.	71.6-127.7	WG550273
Specific Conductance	umhos/cm	427	430.	101.	85-115	WG550385
1-Methylnaphthalene	mg/kg	.033	0.0200	60.8	48-113	WG550363
2-Chloronaphthalene	mg/kg	.033	0.0200	60.5	51-114	WG550363
2-Methylnaphthalene	mg/kg	.033	0.0217	65.8	44-109	WG550363
Acenaphthene	mg/kg	.033	0.0218	66.0	52-108	WG550363
Acenaphthylene	mg/kg	.033	0.0219	66.2	51-110	WG550363
Anthracene	mg/kg	.033	0.0235	71.1	58-120	WG550363
Benzo(a)anthracene	mg/kg	.033	0.0217	65.8	54-110	WG550363
Benzo(a)pyrene	mg/kg	.033	0.0236	71.5	56-118	WG550363
Benzo(b)fluoranthene	mg/kg	.033	0.0236	71.6	55-114	WG550363
Benzo(g,h,i)perylene	mg/kg	.033	0.0204	61.9	48-130	WG550363
Benzo(k)fluoranthene	mg/kg	.033	0.0246	74.6	55-122	WG550363
Chrysene	mg/kg	.033	0.0239	72.3	57-118	WG550363
Dibenz(a,h)anthracene	mg/kg	.033	0.0200	60.5	53-122	WG550363
Fluoranthene	mg/kg	.033	0.0234	71.0	58-118	WG550363
Fluorene	mg/kg	.033	0.0228	69.1	54-109	WG550363
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0206	62.5	51-125	WG550363
Naphthalene	mg/kg	.033	0.0190	57.6	45-105	WG550363
Phenanthrene	mg/kg	.033	0.0234	70.8	53-114	WG550363
Pyrene	mg/kg	.033	0.0235	71.3	53-121	WG550363
2-Fluorobiphenyl				64.62	34-129	WG550363
Nitrobenzene-d5				59.21	14-141	WG550363
p-Terphenyl-d14				66.76	25-139	WG550363
ORP	mV	229	220.	96.1	95.6-104.37	WG550622

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chromium, Hexavalent	mg/kg	108.	105.	82.0	50-150	2.82	20	WG550365
pH	su	8.90	8.90	98.0	98-101	0	20	WG550287
Benzene	mg/kg	0.0513	0.0493	102.	76-113	3.89	20	WG550217
Ethylbenzene	mg/kg	0.0564	0.0540	113.	78-115	4.42	20	WG550217
Toluene	mg/kg	0.0544	0.0525	109.	76-114	3.53	20	WG550217
Total Xylene	mg/kg	0.163	0.159	109.	81-118	2.76	20	WG550217
a,a,a-Trifluorotoluene (FID)				103.1	59-128			WG550217
a,a,a-Trifluorotoluene (PID)				105.6	54-144			WG550217
TPH (GC/FID) Low Fraction	mg/kg	7.18	6.92	130.	67-135	3.68	20	WG550217
a,a,a-Trifluorotoluene (FID)				104.8	59-128			WG550217
a,a,a-Trifluorotoluene (PID)				106.4	54-144			WG550217
TPH (GC/FID) High Fraction	ppm	58.4	56.4	97.0	50-150	3.55	25	WG550355
o-Terphenyl				89.55	50-150			WG550355

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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Specific Conductance	umhos/	430.	430.	101.		85-115	0	20	WG550385
1-Methylnaphthalene	mg/kg	0.0236	0.0200	72.0		48-113	16.4	24	WG550363
2-Chloronaphthalene	mg/kg	0.0245	0.0200	74.0		51-114	20.6	24	WG550363
2-Methylnaphthalene	mg/kg	0.0243	0.0217	74.0		44-109	11.2	24	WG550363
Acenaphthene	mg/kg	0.0256	0.0218	78.0		52-108	16.3	22	WG550363
Acenaphthylene	mg/kg	0.0257	0.0219	78.0		51-110	16.0	21	WG550363
Anthracene	mg/kg	0.0272	0.0235	82.0		58-120	14.8	20	WG550363
Benzo(a)anthracene	mg/kg	0.0261	0.0217	79.0		54-110	18.2	22	WG550363
Benzo(a)pyrene	mg/kg	0.0281	0.0236	85.0		56-118	17.3	21	WG550363
Benzo(b)fluoranthene	mg/kg	0.0284	0.0236	86.0		55-114	18.3	20	WG550363
Benzo(g,h,i)perylene	mg/kg	0.0239	0.0204	72.0		48-130	15.5	20	WG550363
Benzo(k)fluoranthene	mg/kg	0.0284	0.0246	86.0		55-122	14.4	25	WG550363
Chrysene	mg/kg	0.0283	0.0239	86.0		57-118	17.1	20	WG550363
Dibenz(a,h)anthracene	mg/kg	0.0235	0.0200	71.0		53-122	16.1	20	WG550363
Fluoranthene	mg/kg	0.0282	0.0234	86.0		58-118	18.6	20	WG550363
Fluorene	mg/kg	0.0267	0.0228	81.0		54-109	15.6	20	WG550363
Indeno(1,2,3-cd)pyrene	mg/kg	0.0239	0.0206	72.0		51-125	14.9	21	WG550363
Naphthalene	mg/kg	0.0215	0.0190	65.0		45-105	12.3	24	WG550363
Phenanthrene	mg/kg	0.0265	0.0234	80.0		53-114	12.5	20	WG550363
Pyrene	mg/kg	0.0279	0.0235	84.0		53-121	17.1	20	WG550363
2-Fluorobiphenyl				72.34		34-129			WG550363
Nitrobenzene-d5				66.20		14-141			WG550363
p-Terphenyl-d14				78.04		25-139			WG550363
ORP	mV	220.	220.	96.0		95.6-104.37	0	20	WG550622

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Chromium,Hexavalent	mg/kg	15.0	0	20	75.0	50-150	L530683-01	WG550365
Arsenic	mg/kg	49.3	3.60	50	91.4	75-125	L530591-32	WG550238
Barium	mg/kg	157.	128.	50	58.0*	75-125	L530591-32	WG550238
Cadmium	mg/kg	45.4	0	50	90.8	75-125	L530591-32	WG550238
Chromium	mg/kg	67.0	16.0	50	102.	75-125	L530591-32	WG550238
Copper	mg/kg	59.9	12.4	50	95.0	75-125	L530591-32	WG550238
Lead	mg/kg	58.4	13.0	50	90.8	75-125	L530591-32	WG550238
Nickel	mg/kg	64.4	19.3	50	90.2	75-125	L530591-32	WG550238
Selenium	mg/kg	44.4	1.24	50	86.3	75-125	L530591-32	WG550238
Silver	mg/kg	48.6	0.730	50	95.7	75-125	L530591-32	WG550238
Zinc	mg/kg	98.4	81.7	50	33.4*	75-125	L530591-32	WG550238
Benzene	mg/kg	0.231	0	.05	92.4	32-137	L530646-01	WG550217
Ethylbenzene	mg/kg	0.251	0	.05	100.	10-150	L530646-01	WG550217
Toluene	mg/kg	0.248	0	.05	99.1	20-142	L530646-01	WG550217
Total Xylene	mg/kg	0.746	0	.15	99.4	16-141	L530646-01	WG550217
a,a,a-Trifluorotoluene(FID)					96.95	59-128		WG550217
a,a,a-Trifluorotoluene(PID)					99.19	54-144		WG550217
TPH (GC/FID) Low Fraction	mg/kg	30.0	0	5.5	109.*	55-109	L530646-01	WG550217
a,a,a-Trifluorotoluene(FID)					101.2	59-128		WG550217
a,a,a-Trifluorotoluene(PID)					109.2	54-144		WG550217

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Est. 1970

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TPH (GC/FID) High Fraction	ppm	414.	400.	60	22.5*	50-150	L530552-02	WG550355
o-Terphenyl					83.24	50-150		WG550355
Mercury	mg/kg	0.355	0.0770	.25	111.	70-130	L530757-01	WG550273
1-Methylnaphthalene	mg/kg	0.0320	0	.033	97.0	25-155	L530922-14	WG550363
2-Chloronaphthalene	mg/kg	0.0291	0	.033	88.3	31-153	L530922-14	WG550363
2-Methylnaphthalene	mg/kg	0.0339	0	.033	103.	22-172	L530922-14	WG550363
Acenaphthene	mg/kg	0.0320	0	.033	97.0	43-133	L530922-14	WG550363
Acenaphthylene	mg/kg	0.0334	0	.033	101.	42-146	L530922-14	WG550363
Anthracene	mg/kg	0.0336	0	.033	102.	38-153	L530922-14	WG550363
Benzo(a)anthracene	mg/kg	0.0294	0	.033	89.2	31-142	L530922-14	WG550363
Benzo(a)pyrene	mg/kg	0.0313	0	.033	94.8	26-152	L530922-14	WG550363
Benzo(b)fluoranthene	mg/kg	0.0331	0	.033	100.	10-188	L530922-14	WG550363
Benzo(g,h,i)perylene	mg/kg	0.0145	0	.033	44.0	10-176	L530922-14	WG550363
Benzo(k)fluoranthene	mg/kg	0.0325	0	.033	98.5	22-163	L530922-14	WG550363
Chrysene	mg/kg	0.0314	0	.033	95.0	26-146	L530922-14	WG550363
Dibenz(a,h)anthracene	mg/kg	0.0150	0	.033	45.5	10-160	L530922-14	WG550363
Fluoranthene	mg/kg	0.0378	0	.033	114.	23-160	L530922-14	WG550363
Fluorene	mg/kg	0.0326	0	.033	98.7	44-143	L530922-14	WG550363
Indeno(1,2,3-cd)pyrene	mg/kg	0.0159	0	.033	48.2	10-157	L530922-14	WG550363
Naphthalene	mg/kg	0.0306	0	.033	92.6	22-156	L530922-14	WG550363
Phenanthrene	mg/kg	0.0357	0	.033	108.	23-164	L530922-14	WG550363
Pyrene	mg/kg	0.0318	0	.033	96.4	12-170	L530922-14	WG550363
2-Fluorobiphenyl					101.1	34-129		WG550363
Nitrobenzene-d5					96.80	14-141		WG550363
p-Terphenyl-d14					86.93	25-139		WG550363

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chromium, Hexavalent	mg/kg	15.3	15.0	76.5	50-150	1.98	20	L530683-01	WG550365
Arsenic	mg/kg	48.9	49.3	90.6	75-125	0.815	20	L530591-32	WG550238
Barium	mg/kg	141.	157.	26.0*	75-125	10.7	20	L530591-32	WG550238
Cadmium	mg/kg	47.3	45.4	94.6	75-125	4.10	20	L530591-32	WG550238
Chromium	mg/kg	72.5	67.0	113.	75-125	7.89	20	L530591-32	WG550238
Copper	mg/kg	62.6	59.9	100.	75-125	4.41	20	L530591-32	WG550238
Lead	mg/kg	58.0	58.4	90.0	75-125	0.687	20	L530591-32	WG550238
Nickel	mg/kg	66.6	64.4	94.6	75-125	3.36	20	L530591-32	WG550238
Selenium	mg/kg	44.1	44.4	85.7	75-125	0.678	20	L530591-32	WG550238
Silver	mg/kg	50.6	48.6	99.7	75-125	4.03	20	L530591-32	WG550238
Zinc	mg/kg	101.	98.4	38.6*	75-125	2.61	20	L530591-32	WG550238
Benzene	mg/kg	0.229	0.231	91.4	32-137	1.07	39	L530646-01	WG550217
Ethylbenzene	mg/kg	0.242	0.251	97.0	10-150	3.59	44	L530646-01	WG550217
Toluene	mg/kg	0.239	0.248	95.6	20-142	3.63	42	L530646-01	WG550217
Total Xylene	mg/kg	0.716	0.746	95.5	16-141	4.08	46	L530646-01	WG550217
a,a,a-Trifluorotoluene(FID)				95.47	59-128				WG550217
a,a,a-Trifluorotoluene(PID)				96.73	54-144				WG550217
TPH (GC/FID) Low Fraction	mg/kg	30.6	30.0	111.*	55-109	1.82	20	L530646-01	WG550217
a,a,a-Trifluorotoluene(FID)				104.7	59-128				WG550217
a,a,a-Trifluorotoluene(PID)				101.8	54-144				WG550217

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	ppm	442.	414.	70.3	50-150	6.70	25	L530552-02	WG550355
o-Terphenyl				75.99	50-150				WG550355
Mercury	mg/kg	0.343	0.355	106.	70-130	3.44	20	L530757-01	WG550273
1-Methylnaphthalene	mg/kg	0.0284	0.0320	86.0	25-155	12.1	27	L530922-14	WG550363
2-Chloronaphthalene	mg/kg	0.0293	0.0291	88.8	31-153	0.560	22	L530922-14	WG550363
2-Methylnaphthalene	mg/kg	0.0331	0.0339	100.	22-172	2.45	29	L530922-14	WG550363
Acenaphthene	mg/kg	0.0332	0.0320	100.	43-133	3.62	26	L530922-14	WG550363
Acenaphthylene	mg/kg	0.0340	0.0334	103.	42-146	1.63	22	L530922-14	WG550363
Anthracene	mg/kg	0.0337	0.0336	102.	38-153	0.319	27	L530922-14	WG550363
Benzo(a)anthracene	mg/kg	0.0296	0.0294	89.7	31-142	0.481	31	L530922-14	WG550363
Benzo(a)pyrene	mg/kg	0.0301	0.0313	91.4	26-152	3.69	32	L530922-14	WG550363
Benzo(b)fluoranthene	mg/kg	0.0320	0.0331	96.9	10-188	3.47	33	L530922-14	WG550363
Benzo(g,h,i)perylene	mg/kg	0.0146	0.0145	44.1	10-176	0.345	30	L530922-14	WG550363
Benzo(k)fluoranthene	mg/kg	0.0309	0.0325	93.6	22-163	5.09	29	L530922-14	WG550363
Chrysene	mg/kg	0.0314	0.0314	95.3	26-146	0.253	30	L530922-14	WG550363
Dibenz(a,h)anthracene	mg/kg	0.0151	0.0150	45.7	10-160	0.406	39	L530922-14	WG550363
Fluoranthene	mg/kg	0.0349	0.0378	106.	23-160	8.07	22	L530922-14	WG550363
Fluorene	mg/kg	0.0334	0.0326	101.	44-143	2.51	23	L530922-14	WG550363
Indeno(1,2,3-cd)pyrene	mg/kg	0.0159	0.0159	48.1	10-157	0.241	40	L530922-14	WG550363
Naphthalene	mg/kg	0.0310	0.0306	94.0	22-156	1.50	27	L530922-14	WG550363
Phenanthrene	mg/kg	0.0331	0.0357	100.	23-164	7.66	25	L530922-14	WG550363
Pyrene	mg/kg	0.0306	0.0318	92.7	12-170	3.90	24	L530922-14	WG550363
2-Fluorobiphenyl				103.1	34-129				WG550363
Nitrobenzene-d5				96.52	14-141				WG550363
p-Terphenyl-d14				90.18	25-139				WG550363

Batch number /Run number / Sample number cross reference

WG550365: R1813090: L530746-01  
 WG550238: R1813752: L530746-01  
 WG550287: R1813770: L530746-01  
 WG550357: R1813851: L530746-01  
 WG550217: R1813870: L530746-01  
 WG550355: R1813930: L530746-01  
 WG550273: R1814373: L530746-01  
 WG550385: R1814390: L530746-01  
 WG550363: R1814650: L530746-01  
 WG550622: R1816270: L530746-01

\* \* 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.