



12065 Lebanon Rd.
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Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Tuesday December 11, 2012

Report Number: L608763


Samples Received: 12/01/12

Client Project: K31E

Description: K31E 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 - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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

December 11, 2012

Date Received : December 01, 2012
Description : K31E Cuttings
Sample ID : K31E-CUT1-113012 12IN
Collected By : MK
Collection Date : 11/30/12 08:45

ESC Sample # : L608763-01
Site ID : K31E
Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	12/05/12	1
Chromium,Trivalent	13.	2.0	mg/kg	Calc.	12/05/12	1
ORP	-62.		mV	2580	12/06/12	1
pH	8.4		su	9045D	12/04/12	1
Sodium Adsorption Ratio	18.			Calc.	12/05/12	1
Specific Conductance	2600		umhos/cm	9050AMod	12/02/12	1
Mercury	BDL	0.020	mg/kg	7471	12/05/12	1
Arsenic	5.2	1.0	mg/kg	6010B	12/05/12	1
Barium	5100	0.25	mg/kg	6010B	12/05/12	1
Cadmium	0.59	0.25	mg/kg	6010B	12/05/12	1
Chromium	13.	0.50	mg/kg	6010B	12/05/12	1
Copper	11.	1.0	mg/kg	6010B	12/05/12	1
Lead	5.8	0.25	mg/kg	6010B	12/05/12	1
Nickel	6.0	1.0	mg/kg	6010B	12/05/12	1
Selenium	BDL	5.0	mg/kg	6010B	12/05/12	5
Silver	BDL	0.50	mg/kg	6010B	12/05/12	1
Zinc	28.	1.5	mg/kg	6010B	12/05/12	1
Benzene	0.0040	0.0025	mg/kg	8021/8015	12/03/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/03/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/03/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/03/12	5
TPH (GC/FID) Low Fraction	1.0	0.50	mg/kg	GRO	12/03/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	93.6		% Rec.	8021/8015	12/03/12	5
a,a,a-Trifluorotoluene(PID)	99.1		% Rec.	8021/8015	12/03/12	5
TPH (GC/FID) High Fraction	190	4.0	mg/kg	3546/DRO	12/10/12	1
Surrogate recovery(%)						
o-Terphenyl	50.2		% Rec.	3546/DRO	12/10/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Acenaphthene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Acenaphthylene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Benzo(a)anthracene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Benzo(a)pyrene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L608763-01 (PH) - 8.4@22.7c



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 Collected By : MK
 Collection Date : 11/30/12 08:45

ESC Sample # : L608763-01
 Site ID : K31E
 Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Benzo(g,h,i)perylene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Benzo(k)fluoranthene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Chrysene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Dibenz(a,h)anthracene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Fluoranthene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Fluorene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Indeno(1,2,3-cd)pyrene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Naphthalene	0.23	0.12	mg/kg	8270C-SIM	12/06/12	20
Phenanthrene	0.21	0.12	mg/kg	8270C-SIM	12/06/12	20
Pyrene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
1-Methylnaphthalene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
2-Methylnaphthalene	0.43	0.12	mg/kg	8270C-SIM	12/06/12	20
2-Chloronaphthalene	BDL	0.12	mg/kg	8270C-SIM	12/06/12	20
Surrogate Recovery						
Nitrobenzene-d5	59.4		% Rec.	8270C-SIM	12/06/12	20
2-Fluorobiphenyl	61.6		% Rec.	8270C-SIM	12/06/12	20
p-Terphenyl-d14	96.1		% Rec.	8270C-SIM	12/06/12	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 12/11/12 15:09 Printed: 12/11/12 15:10
 L608763-01 (PH) - 8.4@22.7c



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December 11, 2012

Date Received : December 01, 2012
 Description : K31E Cuttings
 Sample ID : K31E-CUT2-113012 12IN
 Collected By : MK
 Collection Date : 11/30/12 08:55

ESC Sample # : L608763-02
 Site ID : K31E
 Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	8.1		su	9045D	12/04/12	1
Sodium Adsorption Ratio	21.			Calc.	12/05/12	1
Specific Conductance	3000		umhos/cm	9050AMod	12/02/12	1
Arsenic	2.3	1.0	mg/kg	6010B	12/05/12	1
Benzene	0.0073	0.0025	mg/kg	8021/8015	12/03/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/03/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/03/12	5
Total Xylene	0.0091	0.0075	mg/kg	8021/8015	12/03/12	5
TPH (GC/FID) Low Fraction	3.0	0.50	mg/kg	GRO	12/03/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	103.		% Rec.	8021/8015	12/03/12	5
a,a,a-Trifluorotoluene(PID)	99.3		% Rec.	8021/8015	12/03/12	5
TPH (GC/FID) High Fraction	220	4.0	mg/kg	3546/DRO	12/10/12	1
Surrogate recovery(%)						
o-Terphenyl	53.5		% Rec.	3546/DRO	12/10/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Naphthalene	0.21	0.060	mg/kg	8270C-SIM	12/07/12	10
Phenanthrene	0.12	0.060	mg/kg	8270C-SIM	12/07/12	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
1-Methylnaphthalene	0.086	0.060	mg/kg	8270C-SIM	12/07/12	10
2-Methylnaphthalene	0.37	0.060	mg/kg	8270C-SIM	12/07/12	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Surrogate Recovery						
Nitrobenzene-d5	107.		% Rec.	8270C-SIM	12/07/12	10
2-Fluorobiphenyl	97.8		% Rec.	8270C-SIM	12/07/12	10

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 L608763-02 (PH) - 8.1@22.6c
 L608763-02 (SV8270PAHSIM) - Dilution due to matrix



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December 11, 2012

Date Received : December 01, 2012
Description : K31E Cuttings
Sample ID : K31E-CUT2-113012 12IN
Collected By : MK
Collection Date : 11/30/12 08:55

ESC Sample # : L608763-02
Site ID : K31E
Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
p-Terphenyl-d14	127.		% Rec.	8270C-SIM	12/07/12	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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L608763-02 (SV8270PAHSIM) - Dilution due to matrix



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December 11, 2012

Date Received : December 01, 2012
 Description : K31E Cuttings
 Sample ID : K31E-CUT3-113012 12IN
 Collected By : MK
 Collection Date : 11/30/12 09:05

ESC Sample # : L608763-03

Site ID : K31E

Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	8.4		su	9045D	12/04/12	1
Sodium Adsorption Ratio	20.			Calc.	12/05/12	1
Specific Conductance	2100		umhos/cm	9050AMod	12/02/12	1
Arsenic	1.7	1.0	mg/kg	6010B	12/05/12	1
Benzene	0.0062	0.0025	mg/kg	8021/8015	12/03/12	5
Toluene	BDL	0.025	mg/kg	8021/8015	12/03/12	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	12/03/12	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	12/03/12	5
TPH (GC/FID) Low Fraction	2.1	0.50	mg/kg	GRO	12/03/12	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	103.		% Rec.	8021/8015	12/03/12	5
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021/8015	12/03/12	5
TPH (GC/FID) High Fraction	300	4.0	mg/kg	3546/DRO	12/10/12	1
Surrogate recovery(%)						
o-Terphenyl	48.5		% Rec.	3546/DRO	12/10/12	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Acenaphthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Acenaphthylene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(a)anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(a)pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(b)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(g,h,i)perylene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Benzo(k)fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Chrysene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Dibenz(a,h)anthracene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Fluoranthene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Fluorene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Indeno(1,2,3-cd)pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Naphthalene	0.13	0.060	mg/kg	8270C-SIM	12/07/12	10
Phenanthrene	0.065	0.060	mg/kg	8270C-SIM	12/07/12	10
Pyrene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
1-Methylnaphthalene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
2-Methylnaphthalene	0.20	0.060	mg/kg	8270C-SIM	12/07/12	10
2-Chloronaphthalene	BDL	0.060	mg/kg	8270C-SIM	12/07/12	10
Surrogate Recovery						
Nitrobenzene-d5	109.		% Rec.	8270C-SIM	12/07/12	10
2-Fluorobiphenyl	101.		% Rec.	8270C-SIM	12/07/12	10

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 L608763-03 (SV8270PAHSIM) - Dilution due to matrix
 L608763-03 (PH) - 8.4@22.8c
 L608763-03 (DRO) - low surrogate confirmed with first extraction



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Date Received : December 01, 2012
Description : K31E Cuttings
Sample ID : K31E-CUT3-113012 12IN
Collected By : MK
Collection Date : 11/30/12 09:05

ESC Sample # : L608763-03
Site ID : K31E
Project # : K31E

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
p-Terphenyl-d14	122.		% Rec.	8270C-SIM	12/07/12	10

BDL - Below Detection Limit
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Reported: 12/11/12 15:09 Printed: 12/11/12 15:10
L608763-03 (SV8270PAHSIM) - Dilution due to matrix
L608763-03 (PH) - 8.4@22.8c
L608763-03 (DRO) - low surrogate confirmed with first extraction

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L608763-01	WG626081	SAMP	Selenium	R2465741	O	
	WG625861	SAMP	Nitrobenzene-d5	R2467957	J7	
	WG625861	SAMP	2-Fluorobiphenyl	R2467957	J7	
	WG625861	SAMP	p-Terphenyl-d14	R2467957	J7	
	WG625973	SAMP	pH	R2464338	T8	
	WG626373	SAMP	ORP	R2467259	T8	
L608763-02	WG626275	SAMP	Anthracene	R2467999	J3	
	WG626275	SAMP	Acenaphthene	R2467999	J3	
	WG626275	SAMP	Acenaphthylene	R2467999	J3	
	WG626275	SAMP	Benzo(a)anthracene	R2467999	J3	
	WG626275	SAMP	Benzo(a)pyrene	R2467999	J3	
	WG626275	SAMP	Benzo(b)fluoranthene	R2467999	J3	
	WG626275	SAMP	Benzo(g,h,i)perylene	R2467999	J3	
	WG626275	SAMP	Chrysene	R2467999	J3	
	WG626275	SAMP	Dibenz(a,h)anthracene	R2467999	J3	
	WG626275	SAMP	Fluoranthene	R2467999	J3	
	WG626275	SAMP	Fluorene	R2467999	J3	
	WG626275	SAMP	Indeno(1,2,3-cd)pyrene	R2467999	J3	
	WG626275	SAMP	Phenanthrene	R2467999	J3	
	WG626275	SAMP	Pyrene	R2467999	J3	
	WG626275	SAMP	2-Chloronaphthalene	R2467999	J3	
	WG625973	SAMP	pH	R2464338	T8	
	L608763-03	WG626275	SAMP	Anthracene	R2467999	J3
		WG626275	SAMP	Acenaphthene	R2467999	J3
WG626275		SAMP	Acenaphthylene	R2467999	J3	
WG626275		SAMP	Benzo(a)anthracene	R2467999	J3	
WG626275		SAMP	Benzo(a)pyrene	R2467999	J3	
WG626275		SAMP	Benzo(b)fluoranthene	R2467999	J3	
WG626275		SAMP	Benzo(g,h,i)perylene	R2467999	J3	
WG626275		SAMP	Chrysene	R2467999	J3	
WG626275		SAMP	Dibenz(a,h)anthracene	R2467999	J3	
WG626275		SAMP	Fluoranthene	R2467999	J3	
WG626275		SAMP	Fluorene	R2467999	J3	
WG626275		SAMP	Indeno(1,2,3-cd)pyrene	R2467999	J3	
WG626275		SAMP	Phenanthrene	R2467999	J3	
WG626275		SAMP	Pyrene	R2467999	J3	
WG626275		SAMP	2-Chloronaphthalene	R2467999	J3	
WG625973		SAMP	pH	R2464338	T8	
WG626823		SAMP	o-Terphenyl	R2470297	J2	

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
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 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
12/11/12 at 15:10:21

TSR Signing Reports: 358
R5 - Desired TAT

Try not to report benzene as BDL above a 250x dilution. ONLY log soil samples under this account. Waters get logged under ENCRCO. Log all PAHs as PAHSIM.

Sample: L608763-01 Account: ENCANACO Received: 12/01/12 09:00 Due Date: 12/07/12 00:00 RPT Date: 12/11/12 15:09

Sample: L608763-02 Account: ENCANACO Received: 12/01/12 09:00 Due Date: 12/07/12 00:00 RPT Date: 12/11/12 15:09

Sample: L608763-03 Account: ENCANACO Received: 12/01/12 09:00 Due Date: 12/07/12 00:00 RPT Date: 12/11/12 15:09



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EnCana Oil & Gas Inc. - CO
Chris Hines / Matt Kasten
2717 County Road 215, Suite 100

Parachute, CO 81635

Quality Assurance Report
Level II

L608763

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 11, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Specific Conductance	2.85	umhos/cm			WG625840	12/02/12 11:29
Benzene	< .0005	mg/kg			WG625890	12/03/12 02:21
Ethylbenzene	< .0005	mg/kg			WG625890	12/03/12 02:21
Toluene	< .005	mg/kg			WG625890	12/03/12 02:21
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG625890	12/03/12 02:21
Total Xylene	< .0015	mg/kg			WG625890	12/03/12 02:21
a,a,a-Trifluorotoluene(FID)		% Rec.	104.3	59-128	WG625890	12/03/12 02:21
a,a,a-Trifluorotoluene(PID)		% Rec.	97.20	54-144	WG625890	12/03/12 02:21
Benzene	< .0005	mg/kg			WG625889	12/03/12 02:20
Ethylbenzene	< .0005	mg/kg			WG625889	12/03/12 02:20
Toluene	< .005	mg/kg			WG625889	12/03/12 02:20
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG625889	12/03/12 02:20
Total Xylene	< .0015	mg/kg			WG625889	12/03/12 02:20
a,a,a-Trifluorotoluene(FID)		% Rec.	93.80	59-128	WG625889	12/03/12 02:20
a,a,a-Trifluorotoluene(PID)		% Rec.	99.56	54-144	WG625889	12/03/12 02:20
Chromium,Hexavalent	< 2	mg/kg			WG625809	12/05/12 13:51
Arsenic	< 1	mg/kg			WG626083	12/05/12 10:57
Mercury	< .02	mg/kg			WG625863	12/05/12 10:39
Arsenic	< 1	mg/kg			WG626081	12/05/12 11:09
Barium	< .25	mg/kg			WG626081	12/05/12 11:09
Cadmium	< .25	mg/kg			WG626081	12/05/12 11:09
Chromium	< .5	mg/kg			WG626081	12/05/12 11:09
Copper	< 1	mg/kg			WG626081	12/05/12 11:09
Lead	< .25	mg/kg			WG626081	12/05/12 11:09
Nickel	< 1	mg/kg			WG626081	12/05/12 11:09
Selenium	< 1	mg/kg			WG626081	12/05/12 11:09
Silver	< .5	mg/kg			WG626081	12/05/12 11:09
Zinc	< 1.5	mg/kg			WG626081	12/05/12 11:09
1-Methylnaphthalene	< .006	mg/kg			WG625861	12/06/12 15:49
2-Chloronaphthalene	< .006	mg/kg			WG625861	12/06/12 15:49
2-Methylnaphthalene	< .006	mg/kg			WG625861	12/06/12 15:49
Acenaphthene	< .006	mg/kg			WG625861	12/06/12 15:49
Acenaphthylene	< .006	mg/kg			WG625861	12/06/12 15:49
Anthracene	< .006	mg/kg			WG625861	12/06/12 15:49
Benzo(a)anthracene	< .006	mg/kg			WG625861	12/06/12 15:49
Benzo(a)pyrene	< .006	mg/kg			WG625861	12/06/12 15:49
Benzo(b)fluoranthene	< .006	mg/kg			WG625861	12/06/12 15:49
Benzo(g,h,i)perylene	< .006	mg/kg			WG625861	12/06/12 15:49
Benzo(k)fluoranthene	< .006	mg/kg			WG625861	12/06/12 15:49
Chrysene	< .006	mg/kg			WG625861	12/06/12 15:49
Dibenz(a,h)anthracene	< .006	mg/kg			WG625861	12/06/12 15:49
Fluoranthene	< .006	mg/kg			WG625861	12/06/12 15:49
Fluorene	< .006	mg/kg			WG625861	12/06/12 15:49
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG625861	12/06/12 15:49
Naphthalene	< .006	mg/kg			WG625861	12/06/12 15:49

* Performance of this Analyte is outside of established criteria.

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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Phenanthrene	< .006	mg/kg			WG625861	12/06/12 15:49
Pyrene	< .006	mg/kg			WG625861	12/06/12 15:49
2-Fluorobiphenyl		% Rec.	68.30	34-129	WG625861	12/06/12 15:49
Nitrobenzene-d5		% Rec.	71.10	14-141	WG625861	12/06/12 15:49
p-Terphenyl-d14		% Rec.	81.60	25-139	WG625861	12/06/12 15:49
1-Methylnaphthalene	< .006	mg/kg			WG626275	12/07/12 01:40
2-Chloronaphthalene	< .006	mg/kg			WG626275	12/07/12 01:40
2-Methylnaphthalene	< .006	mg/kg			WG626275	12/07/12 01:40
Acenaphthene	< .006	mg/kg			WG626275	12/07/12 01:40
Acenaphthylene	< .006	mg/kg			WG626275	12/07/12 01:40
Anthracene	< .006	mg/kg			WG626275	12/07/12 01:40
Benzo(a)anthracene	< .006	mg/kg			WG626275	12/07/12 01:40
Benzo(a)pyrene	< .006	mg/kg			WG626275	12/07/12 01:40
Benzo(b)fluoranthene	< .006	mg/kg			WG626275	12/07/12 01:40
Benzo(g,h,i)perylene	< .006	mg/kg			WG626275	12/07/12 01:40
Benzo(k)fluoranthene	< .006	mg/kg			WG626275	12/07/12 01:40
Chrysene	< .006	mg/kg			WG626275	12/07/12 01:40
Dibenz(a,h)anthracene	< .006	mg/kg			WG626275	12/07/12 01:40
Fluoranthene	< .006	mg/kg			WG626275	12/07/12 01:40
Fluorene	< .006	mg/kg			WG626275	12/07/12 01:40
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG626275	12/07/12 01:40
Naphthalene	< .006	mg/kg			WG626275	12/07/12 01:40
Phenanthrene	< .006	mg/kg			WG626275	12/07/12 01:40
Pyrene	< .006	mg/kg			WG626275	12/07/12 01:40
2-Fluorobiphenyl		% Rec.	87.00	34-129	WG626275	12/07/12 01:40
Nitrobenzene-d5		% Rec.	91.80	14-141	WG626275	12/07/12 01:40
p-Terphenyl-d14		% Rec.	97.00	25-139	WG626275	12/07/12 01:40
TPH (GC/FID) High Fraction	< 4	mg/kg			WG626823	12/10/12 08:19
o-Terphenyl		% Rec.	65.20	50-150	WG626823	12/10/12 08:19

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Specific Conductance	umhos/cm	290.	320.	8.81	20	L608537-35	WG625840	
Specific Conductance	umhos/cm	12000	12000	0	20	L608764-01	WG625840	
pH	su	7.10	7.20	1.26*	1	L608642-01	WG625973	
pH	su	8.00	8.00	0.499	1	L608821-03	WG625973	
Chromium,Hexavalent	mg/kg	0	0	0	20	L608328-01	WG625809	
Chromium,Hexavalent	mg/kg	0	0	0	20	L608642-01	WG625809	
Arsenic	mg/kg	3.80	3.89	2.34	20	L608800-04	WG626083	
Mercury	mg/kg	0	0.00261	22.5*	20	L608745-05	WG625863	
Arsenic	mg/kg	1.80	1.00	57.1*	20	L607885-01	WG626081	
Barium	mg/kg	16.0	15.4	3.82	20	L607885-01	WG626081	
Cadmium	mg/kg	0	0.108	NA	20	L607885-01	WG626081	
Chromium	mg/kg	6.00	9.75	47.6*	20	L607885-01	WG626081	

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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Copper	mg/kg	0	0.999	NA	20	L607885-01	WG626081
Lead	mg/kg	4.20	4.20	0	20	L607885-01	WG626081
Nickel	mg/kg	1.60	2.80	54.5*	20	L607885-01	WG626081
Silver	mg/kg	0	0	0	20	L607885-01	WG626081
Zinc	mg/kg	4.50	6.54	37.0*	20	L607885-01	WG626081
Selenium	mg/kg	0	0	0	20	L607885-01	WG626081
ORP	mV	190.	200.	3.05	20	L608636-01	WG626373
ORP	mV	380.	370.	2.14	20	L609023-06	WG626373

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Specific Conductance	umhos/cm	1050	1050	100.	85-115	WG625840
Benzene	mg/kg	.05	0.0546	109.	76-113	WG625890
Ethylbenzene	mg/kg	.05	0.0516	103.	78-115	WG625890
Toluene	mg/kg	.05	0.0493	98.7	76-114	WG625890
Total Xylene	mg/kg	.15	0.154	102.	81-118	WG625890
a,a,a-Trifluorotoluene(PID)				103.6	54-144	WG625890
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.55	101.	67-135	WG625890
a,a,a-Trifluorotoluene(FID)				100.0	59-128	WG625890
Benzene	mg/kg	.05	0.0510	102.	76-113	WG625889
Ethylbenzene	mg/kg	.05	0.0525	105.	78-115	WG625889
Toluene	mg/kg	.05	0.0498	99.7	76-114	WG625889
Total Xylene	mg/kg	.15	0.154	103.	81-118	WG625889
a,a,a-Trifluorotoluene(PID)				100.3	54-144	WG625889
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.02	91.2	67-135	WG625889
a,a,a-Trifluorotoluene(FID)				95.04	59-128	WG625889
pH	su	6.03	5.98	99.2	98-101.6	WG625973
Chromium,Hexavalent	mg/kg	150	140.	93.3	80-120	WG625809
Arsenic	mg/kg	237	236.	99.6	83.1-117	WG626083
Mercury	mg/kg	12.4	13.9	112.	71.6-127.7	WG625863
Arsenic	mg/kg	237	220.	92.8	83.1-117	WG626081
Barium	mg/kg	252	243.	96.4	84.1-116	WG626081
Cadmium	mg/kg	191	173.	90.6	83.2-117	WG626081
Chromium	mg/kg	128	124.	96.9	81.3-118	WG626081
Copper	mg/kg	123	119.	96.7	83.7-116	WG626081
Lead	mg/kg	103	91.6	88.9	83.1-117	WG626081
Nickel	mg/kg	118	103.	87.3	82-118	WG626081
Selenium	mg/kg	110	92.1	83.7	78.7-122	WG626081
Silver	mg/kg	47.3	43.0	90.9	66.2-134	WG626081
Zinc	mg/kg	183	167.	91.3	82-118	WG626081

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
ORP	mV	228	229.	100.	95.6-104.	WG626373
1-Methylnaphthalene	mg/kg	.033	0.0194	58.9	48-113	WG625861
2-Chloronaphthalene	mg/kg	.033	0.0204	61.9	51-114	WG625861
2-Methylnaphthalene	mg/kg	.033	0.0200	60.7	44-109	WG625861
Acenaphthene	mg/kg	.033	0.0202	61.3	52-108	WG625861
Acenaphthylene	mg/kg	.033	0.0213	64.6	51-110	WG625861
Anthracene	mg/kg	.033	0.0227	68.8	58-120	WG625861
Benzo(a)anthracene	mg/kg	.033	0.0245	74.3	54-110	WG625861
Benzo(a)pyrene	mg/kg	.033	0.0226	68.4	56-118	WG625861
Benzo(b)fluoranthene	mg/kg	.033	0.0246	74.5	55-114	WG625861
Benzo(g,h,i)perylene	mg/kg	.033	0.0226	68.5	48-130	WG625861
Benzo(k)fluoranthene	mg/kg	.033	0.0230	69.7	55-122	WG625861
Chrysene	mg/kg	.033	0.0236	71.5	57-118	WG625861
Dibenz(a,h)anthracene	mg/kg	.033	0.0217	65.7	53-122	WG625861
Fluoranthene	mg/kg	.033	0.0227	68.7	58-118	WG625861
Fluorene	mg/kg	.033	0.0218	66.2	54-109	WG625861
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0225	68.1	51-125	WG625861
Naphthalene	mg/kg	.033	0.0190	57.5	45-105	WG625861
Phenanthrene	mg/kg	.033	0.0214	65.0	53-114	WG625861
Pyrene	mg/kg	.033	0.0232	70.3	53-121	WG625861
2-Fluorobiphenyl				63.10	34-129	WG625861
Nitrobenzene-d5				67.00	14-141	WG625861
p-Terphenyl-d14				76.30	25-139	WG625861
1-Methylnaphthalene	mg/kg	.033	0.0217	65.8	48-113	WG626275
2-Chloronaphthalene	mg/kg	.033	0.0214	64.8	51-114	WG626275
2-Methylnaphthalene	mg/kg	.033	0.0221	66.9	44-109	WG626275
Acenaphthene	mg/kg	.033	0.0219	66.3	52-108	WG626275
Acenaphthylene	mg/kg	.033	0.0215	65.1	51-110	WG626275
Anthracene	mg/kg	.033	0.0231	70.0	58-120	WG626275
Benzo(a)anthracene	mg/kg	.033	0.0225	68.3	54-110	WG626275
Benzo(a)pyrene	mg/kg	.033	0.0226	68.6	56-118	WG626275
Benzo(b)fluoranthene	mg/kg	.033	0.0238	72.1	55-114	WG626275
Benzo(g,h,i)perylene	mg/kg	.033	0.0230	69.6	48-130	WG626275
Benzo(k)fluoranthene	mg/kg	.033	0.0241	73.2	55-122	WG626275
Chrysene	mg/kg	.033	0.0235	71.3	57-118	WG626275
Dibenz(a,h)anthracene	mg/kg	.033	0.0225	68.2	53-122	WG626275
Fluoranthene	mg/kg	.033	0.0240	72.7	58-118	WG626275
Fluorene	mg/kg	.033	0.0230	69.6	54-109	WG626275
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0227	68.7	51-125	WG626275
Naphthalene	mg/kg	.033	0.0204	61.9	45-105	WG626275
Phenanthrene	mg/kg	.033	0.0227	68.7	53-114	WG626275
Pyrene	mg/kg	.033	0.0239	72.4	53-121	WG626275
2-Fluorobiphenyl				66.60	34-129	WG626275
Nitrobenzene-d5				70.20	14-141	WG626275
p-Terphenyl-d14				78.70	25-139	WG626275
TPH (GC/FID) High Fraction	mg/kg	60	46.3	77.1	50-150	WG626823
o-Terphenyl				75.00	50-150	WG626823

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Specific Conductance	umhos/	1050	1050	100.	85-115	0	20	WG625840

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0530	0.0546	106.	76-113	2.88	20	WG625890
Ethylbenzene	mg/kg	0.0516	0.0516	103.	78-115	0.100	20	WG625890
Toluene	mg/kg	0.0491	0.0493	98.0	76-114	0.420	20	WG625890
Total Xylene	mg/kg	0.153	0.154	102.	81-118	0.410	20	WG625890
a,a,a-Trifluorotoluene(PID)				102.9	54-144			WG625890
TPH (GC/FID) Low Fraction	mg/kg	5.56	5.55	101.	67-135	0.260	20	WG625890
a,a,a-Trifluorotoluene(FID)				100.7	59-128			WG625890
Benzene	mg/kg	0.0515	0.0510	103.	76-113	0.960	20	WG625889
Ethylbenzene	mg/kg	0.0531	0.0525	106.	78-115	1.14	20	WG625889
Toluene	mg/kg	0.0496	0.0498	99.0	76-114	0.500	20	WG625889
Total Xylene	mg/kg	0.155	0.154	103.	81-118	0.0900	20	WG625889
a,a,a-Trifluorotoluene(PID)				99.69	54-144			WG625889
TPH (GC/FID) Low Fraction	mg/kg	5.04	5.02	92.0	67-135	0.430	20	WG625889
a,a,a-Trifluorotoluene(FID)				95.58	59-128			WG625889
pH	su	5.98	5.98	99.0	98-101.6	0	20	WG625973
Chromium, Hexavalent	mg/kg	137.	140.	91.0	80-120	2.17	20	WG625809
ORP	mV	228.	229.	100.	95.6-104.	0.438	20	WG626373
1-Methylnaphthalene	mg/kg	0.0201	0.0194	61.0	48-113	3.14	24	WG625861
2-Chloronaphthalene	mg/kg	0.0203	0.0204	62.0	51-114	0.410	24	WG625861
2-Methylnaphthalene	mg/kg	0.0209	0.0200	63.0	44-109	4.28	24	WG625861
Acenaphthene	mg/kg	0.0210	0.0202	64.0	52-108	3.83	22	WG625861
Acenaphthylene	mg/kg	0.0218	0.0213	66.0	51-110	2.00	21	WG625861
Anthracene	mg/kg	0.0239	0.0227	72.0	58-120	4.94	20	WG625861
Benzo(a)anthracene	mg/kg	0.0257	0.0245	78.0	54-110	4.86	22	WG625861
Benzo(a)pyrene	mg/kg	0.0237	0.0226	72.0	56-118	4.72	21	WG625861
Benzo(b)fluoranthene	mg/kg	0.0232	0.0246	70.0	55-114	5.98	20	WG625861
Benzo(g,h,i)perylene	mg/kg	0.0241	0.0226	73.0	48-130	6.35	20	WG625861
Benzo(k)fluoranthene	mg/kg	0.0267	0.0230	81.0	55-122	15.1	25	WG625861
Chrysene	mg/kg	0.0247	0.0236	75.0	57-118	4.78	20	WG625861
Dibenz(a,h)anthracene	mg/kg	0.0235	0.0217	71.0	53-122	8.09	20	WG625861
Fluoranthene	mg/kg	0.0242	0.0227	73.0	58-118	6.34	20	WG625861
Fluorene	mg/kg	0.0226	0.0218	68.0	54-109	3.28	20	WG625861
Indeno(1,2,3-cd)pyrene	mg/kg	0.0242	0.0225	73.0	51-125	7.46	21	WG625861
Naphthalene	mg/kg	0.0190	0.0190	57.0	45-105	0.0700	24	WG625861
Phenanthrene	mg/kg	0.0227	0.0214	69.0	53-114	5.58	20	WG625861
Pyrene	mg/kg	0.0242	0.0232	73.0	53-121	4.12	20	WG625861
2-Fluorobiphenyl				64.70	34-129			WG625861
Nitrobenzene-d5				68.60	14-141			WG625861
p-Terphenyl-d14				80.50	25-139			WG625861
1-Methylnaphthalene	mg/kg	0.0269	0.0217	82.0	48-113	21.3	24	WG626275
2-Chloronaphthalene	mg/kg	0.0276	0.0214	84.0	51-114	25.4*	24	WG626275
2-Methylnaphthalene	mg/kg	0.0268	0.0221	81.0	44-109	19.5	24	WG626275
Acenaphthene	mg/kg	0.0277	0.0219	84.0	52-108	23.3*	22	WG626275
Acenaphthylene	mg/kg	0.0272	0.0215	82.0	51-110	23.4*	21	WG626275
Anthracene	mg/kg	0.0295	0.0231	89.0	58-120	24.2*	20	WG626275
Benzo(a)anthracene	mg/kg	0.0289	0.0225	88.0	54-110	24.7*	22	WG626275

* Performance of this Analyte is outside of established criteria.

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Est. 1970

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(a)pyrene	mg/kg	0.0292	0.0226	88.0	56-118	25.4*	21	WG626275
Benzo(b)fluoranthene	mg/kg	0.0310	0.0238	94.0	55-114	26.3*	20	WG626275
Benzo(g,h,i)perylene	mg/kg	0.0296	0.0230	90.0	48-130	25.2*	20	WG626275
Benzo(k)fluoranthene	mg/kg	0.0305	0.0241	92.0	55-122	23.2	25	WG626275
Chrysene	mg/kg	0.0297	0.0235	90.0	57-118	23.4*	20	WG626275
Dibenz(a,h)anthracene	mg/kg	0.0290	0.0225	88.0	53-122	25.4*	20	WG626275
Fluoranthene	mg/kg	0.0310	0.0240	94.0	58-118	25.6*	20	WG626275
Fluorene	mg/kg	0.0286	0.0230	86.0	54-109	21.8*	20	WG626275
Indeno(1,2,3-cd)pyrene	mg/kg	0.0294	0.0227	89.0	51-125	25.8*	21	WG626275
Naphthalene	mg/kg	0.0257	0.0204	78.0	45-105	22.8	24	WG626275
Phenanthrene	mg/kg	0.0294	0.0227	89.0	53-114	25.7*	20	WG626275
Pyrene	mg/kg	0.0296	0.0239	90.0	53-121	21.5*	20	WG626275
2-Fluorobiphenyl				85.30	34-129			WG626275
Nitrobenzene-d5				86.90	14-141			WG626275
p-Terphenyl-d14				95.60	25-139			WG626275
TPH (GC/FID) High Fraction	mg/kg	45.5	46.3	76.0	50-150	1.76	20	WG626823
o-Terphenyl				73.60	50-150			WG626823

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Benzene	mg/kg	0.266	0.0240	.05	96.7	32-137	L608764-02	WG625890
Ethylbenzene	mg/kg	0.225	0.00980	.05	85.9	10-150	L608764-02	WG625890
Toluene	mg/kg	0.241	0.0560	.05	73.9	20-142	L608764-02	WG625890
Total Xylene	mg/kg	0.701	0.0740	.15	83.6	16-141	L608764-02	WG625890
a,a,a-Trifluorotoluene(PID)					102.6	54-144		WG625890
TPH (GC/FID) Low Fraction	mg/kg	24.3	1.70	5.5	82.2	55-109	L608764-02	WG625890
a,a,a-Trifluorotoluene(FID)					99.93	59-128		WG625890
Benzene	mg/kg	0.194	0	.05	77.5	32-137	L607967-06	WG625889
Ethylbenzene	mg/kg	0.197	0	.05	78.7	10-150	L607967-06	WG625889
Toluene	mg/kg	0.192	0	.05	76.6	20-142	L607967-06	WG625889
Total Xylene	mg/kg	0.585	0	.15	78.0	16-141	L607967-06	WG625889
a,a,a-Trifluorotoluene(PID)					99.33	54-144		WG625889
TPH (GC/FID) Low Fraction	mg/kg	19.3	0.000978	5.5	70.3	55-109	L607967-06	WG625889
a,a,a-Trifluorotoluene(FID)					93.68	59-128		WG625889
Arsenic	mg/kg	51.0	3.89	50	94.2	75-125	L608800-04	WG626083
Chromium,Hexavalent	mg/kg	3.72	0	20	18.6*	75-125	L608395-02	WG625809
Mercury	mg/kg	0.244	0.00261	.25	96.7	80-120	L608745-05	WG625863
Arsenic	mg/kg	44.1	1.00	50	86.2	75-125	L607885-01	WG626081
Barium	mg/kg	55.3	15.4	50	79.8	75-125	L607885-01	WG626081
Cadmium	mg/kg	42.1	0.108	50	84.0	75-125	L607885-01	WG626081
Chromium	mg/kg	52.5	9.75	50	85.5	75-125	L607885-01	WG626081
Copper	mg/kg	46.6	0.999	50	91.2	75-125	L607885-01	WG626081
Lead	mg/kg	46.0	4.20	50	83.6	75-125	L607885-01	WG626081
Nickel	mg/kg	40.9	2.80	50	76.2	75-125	L607885-01	WG626081
Silver	mg/kg	46.2	0	50	92.4	75-125	L607885-01	WG626081
Zinc	mg/kg	51.7	6.54	50	90.3	75-125	L607885-01	WG626081

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Selenium	mg/kg	48.3	0	10	96.6	75-125	L607885-01	WG626081
1-Methylnaphthalene	mg/kg	0.0242	0.00250	.033	65.7	25-155	L608605-05	WG625861
2-Chloronaphthalene	mg/kg	0.0207	0	.033	62.6	31-153	L608605-05	WG625861
2-Methylnaphthalene	mg/kg	0.0270	0.00420	.033	69.2	22-172	L608605-05	WG625861
Acenaphthene	mg/kg	0.0211	0	.033	64.0	43-133	L608605-05	WG625861
Acenaphthylene	mg/kg	0.0219	0	.033	66.3	42-146	L608605-05	WG625861
Anthracene	mg/kg	0.0223	0	.033	67.7	38-153	L608605-05	WG625861
Benzo(a)anthracene	mg/kg	0.0213	0	.033	64.5	31-142	L608605-05	WG625861
Benzo(a)pyrene	mg/kg	0.0191	0.000740	.033	55.6	26-152	L608605-05	WG625861
Benzo(b)fluoranthene	mg/kg	0.0203	0	.033	61.4	10-188	L608605-05	WG625861
Benzo(g,h,i)perylene	mg/kg	0.0194	0.00160	.033	54.1	10-176	L608605-05	WG625861
Benzo(k)fluoranthene	mg/kg	0.0189	0	.033	57.4	22-163	L608605-05	WG625861
Chrysene	mg/kg	0.0209	0	.033	63.2	26-146	L608605-05	WG625861
Dibenz(a,h)anthracene	mg/kg	0.0174	0	.033	52.7	10-160	L608605-05	WG625861
Fluoranthene	mg/kg	0.0216	0	.033	65.4	23-160	L608605-05	WG625861
Fluorene	mg/kg	0.0224	0	.033	67.9	44-143	L608605-05	WG625861
Indeno(1,2,3-cd)pyrene	mg/kg	0.0181	0	.033	54.8	10-157	L608605-05	WG625861
Naphthalene	mg/kg	0.0242	0.00370	.033	62.2	22-156	L608605-05	WG625861
Phenanthrene	mg/kg	0.0218	0	.033	65.9	23-164	L608605-05	WG625861
Pyrene	mg/kg	0.0217	0.000600	.033	64.0	12-170	L608605-05	WG625861
2-Fluorobiphenyl					64.20	34-129		WG625861
Nitrobenzene-d5					69.30	14-141		WG625861
p-Terphenyl-d14					64.80	25-139		WG625861
TPH (GC/FID) High Fraction	mg/kg	48.2	0	60	80.2	50-150	L609570-01	WG626823
o-Terphenyl					74.40	50-150		WG626823

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.256	0.266	92.8	32-137	3.78	39	L608764-02	WG625890
Ethylbenzene	mg/kg	0.228	0.225	87.2	10-150	1.44	44	L608764-02	WG625890
Toluene	mg/kg	0.288	0.241	92.8	20-142	17.9	42	L608764-02	WG625890
Total Xylene	mg/kg	0.748	0.701	89.8	16-141	6.50	46	L608764-02	WG625890
a,a,a-Trifluorotoluene(PID)				102.2	54-144				WG625890
TPH (GC/FID) Low Fraction	mg/kg	22.7	24.3	76.3	55-109	6.88	20	L608764-02	WG625890
a,a,a-Trifluorotoluene(FID)				99.27	59-128				WG625890
Benzene	mg/kg	0.202	0.194	80.8	32-137	4.12	39	L607967-06	WG625889
Ethylbenzene	mg/kg	0.200	0.197	80.0	10-150	1.68	44	L607967-06	WG625889
Toluene	mg/kg	0.190	0.192	76.2	20-142	0.630	42	L607967-06	WG625889
Total Xylene	mg/kg	0.589	0.585	78.6	16-141	0.780	46	L607967-06	WG625889
a,a,a-Trifluorotoluene(PID)				100.5	54-144				WG625889
TPH (GC/FID) Low Fraction	mg/kg	18.8	19.3	68.3	55-109	2.93	20	L607967-06	WG625889
a,a,a-Trifluorotoluene(FID)				94.13	59-128				WG625889
Chromium,Hexavalent	mg/kg	4.28	3.72	21.4*	75-125	14.0	20	L608395-02	WG625809
Arsenic	mg/kg	53.7	51.0	99.6	75-125	5.16	20	L608800-04	WG626083
Mercury	mg/kg	0.233	0.244	92.3	80-120	4.64	20	L608745-05	WG625863

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	43.0	44.1	84.0	75-125	2.53	20	L607885-01	WG626081
Barium	mg/kg	58.5	55.3	86.2	75-125	5.62	20	L607885-01	WG626081
Cadmium	mg/kg	43.1	42.1	86.0	75-125	2.35	20	L607885-01	WG626081
Chromium	mg/kg	52.8	52.5	86.1	75-125	0.570	20	L607885-01	WG626081
Copper	mg/kg	45.7	46.6	89.4	75-125	1.95	20	L607885-01	WG626081
Lead	mg/kg	47.6	46.0	86.8	75-125	3.42	20	L607885-01	WG626081
Nickel	mg/kg	41.9	40.9	78.2	75-125	2.42	20	L607885-01	WG626081
Silver	mg/kg	43.6	46.2	87.2	75-125	5.79	20	L607885-01	WG626081
Zinc	mg/kg	49.2	51.7	85.3	75-125	4.96	20	L607885-01	WG626081
Selenium	mg/kg	44.4	48.3	88.8	75-125	8.41	20	L607885-01	WG626081
1-Methylnaphthalene	mg/kg	0.0241	0.0242	65.6	25-155	0.250	27	L608605-05	WG625861
2-Chloronaphthalene	mg/kg	0.0213	0.0207	64.4	31-153	2.87	22	L608605-05	WG625861
2-Methylnaphthalene	mg/kg	0.0268	0.0270	68.4	22-172	0.880	29	L608605-05	WG625861
Acenaphthene	mg/kg	0.0214	0.0211	64.9	43-133	1.45	26	L608605-05	WG625861
Acenaphthylene	mg/kg	0.0228	0.0219	69.0	42-146	3.86	22	L608605-05	WG625861
Anthracene	mg/kg	0.0235	0.0223	71.3	38-153	5.12	27	L608605-05	WG625861
Benzo(a)anthracene	mg/kg	0.0228	0.0213	69.1	31-142	6.94	31	L608605-05	WG625861
Benzo(a)pyrene	mg/kg	0.0205	0.0191	60.0	26-152	7.36	32	L608605-05	WG625861
Benzo(b)fluoranthene	mg/kg	0.0205	0.0203	62.0	10-188	0.960	33	L608605-05	WG625861
Benzo(g,h,i)perylene	mg/kg	0.0213	0.0194	59.7	10-176	9.14	30	L608605-05	WG625861
Benzo(k)fluoranthene	mg/kg	0.0212	0.0189	64.2	22-163	11.2	29	L608605-05	WG625861
Chrysene	mg/kg	0.0221	0.0209	67.0	26-146	5.81	30	L608605-05	WG625861
Dibenz(a,h)anthracene	mg/kg	0.0188	0.0174	56.8	10-160	7.59	39	L608605-05	WG625861
Fluoranthene	mg/kg	0.0225	0.0216	68.3	23-160	4.27	22	L608605-05	WG625861
Fluorene	mg/kg	0.0236	0.0224	71.6	44-143	5.32	23	L608605-05	WG625861
Indeno(1,2,3-cd)pyrene	mg/kg	0.0196	0.0181	59.3	10-157	7.83	40	L608605-05	WG625861
Naphthalene	mg/kg	0.0239	0.0242	61.3	22-156	1.20	27	L608605-05	WG625861
Phenanthrene	mg/kg	0.0228	0.0218	69.0	23-164	4.62	25	L608605-05	WG625861
Pyrene	mg/kg	0.0225	0.0217	66.4	12-170	3.65	24	L608605-05	WG625861
2-Fluorobiphenyl				66.60	34-129				WG625861
Nitrobenzene-d5				69.20	14-141				WG625861
p-Terphenyl-d14				66.30	25-139				WG625861
TPH (GC/FID) High Fraction	mg/kg	43.9	48.2	73.2	50-150	9.18	20	L609570-01	WG626823
o-Terphenyl				70.20	50-150				WG626823

Serial Dilution

Batch number /Run number / Sample number cross reference

WG625840: R2462503: L608763-01 02 03
 WG625890: R2462841: L608763-02 03
 WG625889: R2462859: L608763-01
 WG625973: R2464338: L608763-01 02 03
 WG626083: R2465457: L608763-02 03
 WG625809: R2465459: L608763-01
 WG625863: R2465739: L608763-01
 WG626081: R2465741: L608763-01
 WG626023: R2465917: L608763-01 02
 WG626135: R2466339: L608763-03
 WG626373: R2467259: L608763-01

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WG625861: R2467957: L608763-01
WG626275: R2467999: L608763-02 03
WG626823: R2470297: L608763-01 02 03

* * 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.