

Introduction

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 Sundry Notice to request final closure status for an earthen pit associated with Evacuation Creek Unit 7605 (COGCC facility # 315481, COGCC remediation number #5329). The pit was investigated, characterized and sampled by a third party consultant as authorized by Encana personnel. All samples were collected in accordance with Encana's Environmental Compliance Group's Sampling Procedures. The analytical results for the respective soil samples were within the COGCC Table 910-1 standards and are provided in Table 1 and Attachment A of this submittal. The text below provides the details of the site investigation. For a visual description of the site please refer to Figures 1 and 2 – Site Maps.

Site Investigation

October 15, 2010 – The earthen pit was initially investigated and delineated by a third party contractor utilizing a PetroFlag field unit and a backhoe that was utilized for excavation. A five (5) point composite sample was collected from the pit's spoils and submitted to a laboratory for analysis. The excavated soil was returned to the point of origin after the sample was collected.

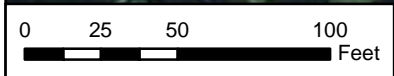
August 2, 2011 – The pit was reassessed by a third party contractor utilizing a photoionization (PID) meter, and was excavated using a trackhoe. Field screen readings were collected throughout the excavation process. There were minimal indicators of hydrocarbon impacts to the soil. PID readings were collected from soil on the pit walls and pit bottom. A grab sample was collected from a depth of twelve (12) feet. The stockpiled soil from the excavation was backfilled and compacted into the excavation. Five (5) background samples were collected from upgradient of the excavation site from a depth of approximately six (6) inches. These samples were sent the lab for analysis with respect to arsenic.

Conclusion

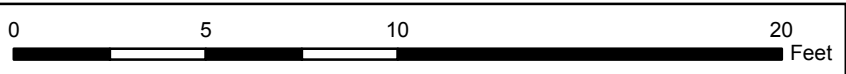
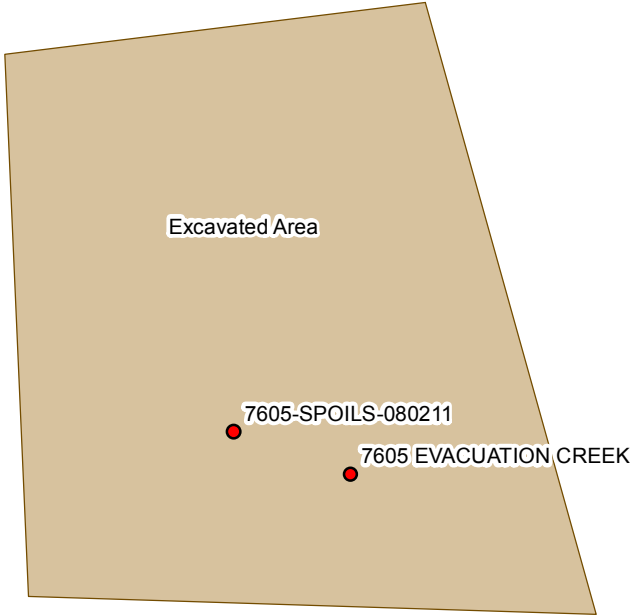
Based on the site investigation and analytical results, the pit associated with the Evacuation Creek Unit 7605 is in compliance with the standards specified within COGCC Table 910-1. Encana respectfully requests that final closure be granted for the respective pit, COGCC remediation #5329.

Analytical Review

Sample results indicate that the soil within the earthen pit footprint on Encana's Evacuation Creek Unit 7605 well pad have exceedances of COGCC Table 910-1 allowable concentrations for arsenic (6.2 ppm). Though the arsenic concentration in the soil is above the allowable concentration identified in Table 910-1, the concentration is within the range of arsenic background values (3.9-8.0 ppm) in this area. Based on these results and footnote 1 to COGCC Table 910-1, Encana requests that the COGCC consider the higher range of background arsenic value(s) as the allowable concentration for this constituent. Please see Attachment A for the respective laboratory analytical results.



Evacuation Creek 7605 Sample Location Map



							Analytes (BDL = Below Detection Limit; NA = Not Applicable; NS = Not Sampled)																														
							Organics in Soil (mg/Kg)																														
							Allowable Concentration -->		500	NA	NA	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	see below	<12	(6-9)						
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix		TPH	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) 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								
							146	BDL	8.7	BDL	BDL	BDL	1.16	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
							NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
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							NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
							NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
7605	7605-SPOILS-080211 12FT	8/2/2011	ESC	KHR	Soil	Spoils	8.7	BDL	8.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL							

Metals in Soil (mg/kg [ppm])														
0.39	15000	15000	2 (mg/L)	NA	70	120000	23	3100	400	23	1600	390	390	23000
Arsenic	Barium - LDNR True Total Barium	Barium - EPA Total Barium	Boron - Hot Water Soluble	Boron - EPA Total Boron	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
3.5	NS	180	NS	NS	0.31	10	BDL	14	14	0.033	12	0.96	BDL	42
8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
7.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6.2	NS	150	NS	NS	BDL	11	BDL	13	8.7	BDL	11	BDL	BDL	39



15-Nov-2010

Herman Lucero
HRL Compliance Solutions
744 Horizon Ct. Suite 140
Grand Junction, CO 81506

Re: **Encana Pit Closure 10-418**

Work Order: **1011047**

Dear Herman,

ALS Environmental received 3 samples on 02-Nov-2010 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 27.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: IL100452

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental The ALS logo, a stylized 'A' with a flame inside a circle.

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions
Project: Encana Pit Closure 10-418
Work Order: 1011047**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1011047-01	Evac. Creek 7607	Soil		10/18/2010 15:30	11/2/2010 09:15	<input type="checkbox"/>
1011047-02	Found. Creek 7404	Soil		10/28/2010 11:20	11/2/2010 09:15	<input type="checkbox"/>
1011047-03	Evac. Creek 7605	Soil		10/18/2010 09:30	11/2/2010 09:15	<input type="checkbox"/>

Client: HRL Compliance Solutions**Project:** Encana Pit Closure 10-418**Work Order:** 1011047**Case Narrative**

Samples Evac Creek 7607 and Evac Creek 7605 were received after the hold time had expired for ERO, GRO, PAH and Volatile analyses.

Batch 30342 MS/MSD data for ERO was not related to this project's samples.

Batch 30340 sample Found Creek 7404 MS/MSD recoveries for several Metals were below control limits due to matrix interference.

Batch 30452 MS/MSD data for PAHs is not related to this project's samples.

Batch 30436 MS/MSD data for Hexavalent Chromium is not related to this project's samples.

Client: HRL Compliance Solutions
Project: Encana Pit Closure 10-418
WorkOrder: 1011047

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: 15-Nov-10

Client: HRL Compliance Solutions

Project: Encana Pit Closure 10-418

Sample ID: Evac. Creek 7605

Collection Date: 10/18/2010 09:30 AM

Work Order: 1011047

Lab ID: 1011047-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
SW8015M					Prep Date: 11/3/2010	Analyst: RM
ERO (C8-C36)	71	H	5.3	mg/Kg-dry	1	11/4/2010 03:19 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>69.0</i>		<i>30-125</i>	<i>%REC</i>	<i>1</i>	11/4/2010 03:19 PM
GASOLINE RANGE ORGANICS BY GC-FID						
SW8015						Analyst: RM
GRO (C5-C12)	75,000	H	6,400	µg/Kg-dry	100	11/3/2010 11:00 AM
<i>Surr: Toluene-d8</i>	<i>107</i>		<i>50-150</i>	<i>%REC</i>	<i>100</i>	11/3/2010 11:00 AM
MERCURY BY CVAA						
SW7471					Prep Date: 11/5/2010	Analyst: LR
Mercury	0.033		0.024	mg/Kg-dry	1	11/5/2010 03:58 PM
METALS BY ICP-MS						
SW6020A					Prep Date: 11/3/2010	Analyst: CES
Arsenic	3.5		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Barium	180		4.0	mg/Kg-dry	10	11/8/2010 02:19 PM
Cadmium	0.31		0.16	mg/Kg-dry	1	11/5/2010 08:08 PM
Chromium	10		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Copper	14		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Lead	14		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Nickel	12		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Selenium	0.96		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Silver	ND		0.40	mg/Kg-dry	1	11/5/2010 08:08 PM
Zinc	42		0.81	mg/Kg-dry	1	11/5/2010 08:08 PM
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) - SIM						
SW8270M					Prep Date: 11/10/2010	Analyst: HL
1-Methylnaphthalene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
2-Methylnaphthalene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Acenaphthene	ND	H	6.1	µg/Kg-dry	1	11/13/2010 07:10 AM
Acenaphthylene	ND	H	18	µg/Kg-dry	1	11/13/2010 07:10 AM
Anthracene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(a)anthracene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(a)pyrene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(b)fluoranthene	ND	H	24	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(b-k)fluoranthene	ND	H	24	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(e)pyrene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(g,h,i)perylene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Benzo(k)fluoranthene	ND	H	24	µg/Kg-dry	1	11/13/2010 07:10 AM
Chrysene	ND	H	6.1	µg/Kg-dry	1	11/13/2010 07:10 AM
Dibenzo(a,h)anthracene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Fluoranthene	ND	H	18	µg/Kg-dry	1	11/13/2010 07:10 AM
Fluorene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Indeno(1,2,3-cd)pyrene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Naphthalene	ND	H	18	µg/Kg-dry	1	11/13/2010 07:10 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 15-Nov-10

Client: HRL Compliance Solutions

Project: Encana Pit Closure 10-418

Sample ID: Evac. Creek 7605

Collection Date: 10/18/2010 09:30 AM

Work Order: 1011047

Lab ID: 1011047-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Perylene	ND	H	12	µg/Kg-dry	1	11/13/2010 07:10 AM
Phenanthrene	ND	H	30	µg/Kg-dry	1	11/13/2010 07:10 AM
Phenol	ND	H	6.1	µg/Kg-dry	1	11/13/2010 07:10 AM
Pyrene	ND	H	18	µg/Kg-dry	1	11/13/2010 07:10 AM
Surr: 2-Fluorobiphenyl	28.8	S	45-105	%REC	1	11/13/2010 07:10 AM
Surr: 4-Terphenyl-d14	94.8		30-125	%REC	1	11/13/2010 07:10 AM
Surr: Nitrobenzene-d5	61.4		35-100	%REC	1	11/13/2010 07:10 AM
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: CW
Benzene	ND	H	22	µg/Kg-dry	100	11/7/2010 12:58 PM
Ethylbenzene	ND	H	15	µg/Kg-dry	100	11/7/2010 12:58 PM
m,p-Xylene	ND	H	20	µg/Kg-dry	100	11/7/2010 12:58 PM
o-Xylene	ND	H	16	µg/Kg-dry	100	11/7/2010 12:58 PM
Toluene	ND	H	15	µg/Kg-dry	100	11/7/2010 12:58 PM
Xylenes, Total	ND	H	36	µg/Kg-dry	100	11/7/2010 12:58 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	10			mg/L-dry	1	11/9/2010
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 11/5/2010	Analyst: MB
Chromium, Hexavalent	ND		0.63	mg/Kg-dry	1	11/8/2010
MOISTURE			A2540 G			Analyst: RS
Moisture	22	H	0.010	% of sample	1	11/2/2010 02:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 15-Nov-10

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30342** Instrument ID **GC8** Method: **SW8015M**

MBLK	Sample ID: DBLKS1-30342-30342				Units: mg/Kg		Analysis Date: 11/4/2010 03:19 PM			
Client ID:	Run ID: GC8_101104A				SeqNo: 1474455		Prep Date: 11/3/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C8-C36)	ND	4.2								
<i>Surr: 4-Terphenyl-d14</i>	<i>1.318</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>79.1</i>	<i>30-125</i>	<i>0</i>			

LCS	Sample ID: DLCSS1-30342-30342				Units: mg/Kg		Analysis Date: 11/4/2010 03:19 PM			
Client ID:	Run ID: GC8_101104A				SeqNo: 1474457		Prep Date: 11/3/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C8-C36)	283.1	4.2	333.3	0	84.9	60-130	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.126</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>67.6</i>	<i>30-125</i>	<i>0</i>			

LCSD	Sample ID: DLCSDS1-30342-30342				Units: mg/Kg		Analysis Date: 11/4/2010 03:19 PM			
Client ID:	Run ID: GC8_101104A				SeqNo: 1474456		Prep Date: 11/3/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C8-C36)	234.8	4.2	333.3	0	70.4	60-130	283.1	18.7	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>0.8608</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>51.6</i>	<i>30-125</i>	<i>1.126</i>	<i>26.7</i>	<i>30</i>	

MS	Sample ID: 1011058-03B MS				Units: mg/Kg		Analysis Date: 11/4/2010 03:19 PM			
Client ID:	Run ID: GC8_101104A				SeqNo: 1474448		Prep Date: 11/3/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C8-C36)	348	4.1	328.7	459.2	-33.8	60-130	0			S
<i>Surr: 4-Terphenyl-d14</i>	<i>0.6642</i>	<i>0</i>	<i>1.644</i>	<i>0</i>	<i>40.4</i>	<i>30-125</i>	<i>0</i>			

MSD	Sample ID: 1011058-03B MSD				Units: mg/Kg		Analysis Date: 11/4/2010 03:19 PM			
Client ID:	Run ID: GC8_101104A				SeqNo: 1474449		Prep Date: 11/3/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C8-C36)	575	4.1	330.6	459.2	35	60-130	348	49.2	30	SR
<i>Surr: 4-Terphenyl-d14</i>	<i>0.7568</i>	<i>0</i>	<i>1.653</i>	<i>0</i>	<i>45.8</i>	<i>30-125</i>	<i>0.6642</i>	<i>13</i>	<i>30</i>	

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **R83390** Instrument ID **GC9** Method: **SW8015**

MBLK	Sample ID: MB-R83390-R83390				Units: µg/L		Analysis Date: 11/3/2010 11:00 AM			
Client ID:	Run ID: GC9_101103A				SeqNo: 1473285		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C5-C12)	ND	200								
<i>Surr: Toluene-d8</i>	<i>104.7</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>105</i>	<i>70-130</i>	<i>0</i>			

LCS	Sample ID: LCS-R83390-R83390				Units: µg/L		Analysis Date: 11/3/2010 11:00 AM			
Client ID:	Run ID: GC9_101103A				SeqNo: 1473286		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C5-C12)	24890	200	25000	0	99.6	70-130	0			
<i>Surr: Toluene-d8</i>	<i>106.5</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>106</i>	<i>70-130</i>	<i>0</i>			

LCSD	Sample ID: LCSD-R83390-R83390				Units: µg/L		Analysis Date: 11/3/2010 11:00 AM			
Client ID:	Run ID: GC9_101103A				SeqNo: 1473298		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C5-C12)	25750	200	25000	0	103	70-130	24890	3.38	30	
<i>Surr: Toluene-d8</i>	<i>102.1</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>106.5</i>	<i>4.24</i>	<i>30</i>	

MS	Sample ID: 1011010-01AMS				Units: µg/Kg		Analysis Date: 11/3/2010 11:00 AM			
Client ID:	Run ID: GC9_101103A				SeqNo: 1473344		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C5-C12)	2574000	5,000	2500000	0	103	70-130	0			
<i>Surr: Toluene-d8</i>	<i>10370</i>	<i>0</i>	<i>10000</i>	<i>0</i>	<i>104</i>	<i>50-150</i>	<i>0</i>			

MSD	Sample ID: 1011010-01AMSD				Units: µg/Kg		Analysis Date: 11/3/2010 11:00 AM			
Client ID:	Run ID: GC9_101103A				SeqNo: 1473345		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C5-C12)	2484000	5,000	2500000	0	99.4	70-130	2574000	3.59	30	
<i>Surr: Toluene-d8</i>	<i>9878</i>	<i>0</i>	<i>10000</i>	<i>0</i>	<i>98.8</i>	<i>50-150</i>	<i>10370</i>	<i>4.83</i>	<i>30</i>	

The following samples were analyzed in this batch: | 1011047-01A | 1011047-02A | 1011047-03A |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30380** Instrument ID **HG1** Method: **SW7471**

MBLK	Sample ID: MBLK-30380-30380				Units: mg/Kg			Analysis Date: 11/5/2010 03:21 PM		
Client ID:	Run ID: HG1_101105A				SeqNo: 1474650			Prep Date: 11/5/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS	Sample ID: LCS-30380-30380				Units: mg/Kg			Analysis Date: 11/5/2010 03:23 PM		
Client ID:	Run ID: HG1_101105A				SeqNo: 1474651			Prep Date: 11/5/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1792	0.020	0.1665		0	108	80-120	0		

LCSD	Sample ID: LCSD-30380-30380				Units: mg/Kg			Analysis Date: 11/5/2010 03:25 PM		
Client ID:	Run ID: HG1_101105A				SeqNo: 1474652			Prep Date: 11/5/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1732	0.020	0.1665		0	104	80-120	0.1792	3.36	20

MS	Sample ID: 1011047-03AMS				Units: mg/Kg			Analysis Date: 11/5/2010 04:00 PM		
Client ID: Evac. Creek 7605	Run ID: HG1_101105A				SeqNo: 1474680			Prep Date: 11/5/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1733	0.020	0.1662	0.02617	88.5	75-125		0		

MSD	Sample ID: 1011047-03AMSD				Units: mg/Kg			Analysis Date: 11/5/2010 04:01 PM		
Client ID: Evac. Creek 7605	Run ID: HG1_101105A				SeqNo: 1474681			Prep Date: 11/5/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1764	0.020	0.1651	0.02617	91	75-125	0.1733	1.8	35	

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30340** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK	Sample ID: MBLK-30340-30340		Units: mg/Kg		Analysis Date: 11/5/2010 02:00 PM					
Client ID:	Run ID: ICPMS1_101105A		SeqNo: 1474531		Prep Date: 11/3/2010		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.02937	0.25								J
Barium	ND	0.25								
Cadmium	0.01178	0.10								J
Chromium	0.01494	0.25								J
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS	Sample ID: LCS-30340-30340		Units: mg/Kg		Analysis Date: 11/5/2010 02:06 PM					
Client ID:	Run ID: ICPMS1_101105A		SeqNo: 1474532		Prep Date: 11/3/2010		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.324	0.25	5	0	86.5	80-120	0			
Barium	4.972	0.25	5	0	99.4	80-120	0			
Cadmium	4.5	0.10	5	0	90	80-120	0			
Chromium	5.15	0.25	5	0	103	80-120	0			
Copper	4.994	0.25	5	0	99.9	80-120	0			
Lead	5.065	0.25	5	0	101	80-120	0			
Nickel	4.902	0.25	5	0	98	80-120	0			
Selenium	4.154	0.25	5	0	83.1	80-120	0			
Silver	4.92	0.25	5	0	98.4	80-120	0			
Zinc	4.27	0.50	5	0	85.4	80-120	0			

LCSD	Sample ID: LCSD-30340-30340		Units: mg/Kg		Analysis Date: 11/5/2010 02:14 PM					
Client ID:	Run ID: ICPMS1_101105A		SeqNo: 1474533		Prep Date: 11/3/2010		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.354	0.25	5	0	87.1	80-120	4.324	0.691	20	
Barium	4.993	0.25	5	0	99.9	80-120	4.972	0.411	20	
Cadmium	4.508	0.10	5	0	90.2	80-120	4.5	0.178	20	
Chromium	5.15	0.25	5	0	103	80-120	5.15	0	20	
Copper	4.988	0.25	5	0	99.8	80-120	4.994	0.12	20	
Lead	5.105	0.25	5	0	102	80-120	5.065	0.787	20	
Nickel	4.958	0.25	5	0	99.2	80-120	4.902	1.16	20	
Selenium	4.038	0.25	5	0	80.8	80-120	4.154	2.82	20	
Silver	4.895	0.25	5	0	97.9	80-120	4.92	0.509	20	
Zinc	4.24	0.50	5	0	84.8	80-120	4.27	0.705	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30340** Instrument ID **ICPMS1** Method: **SW6020A**

MS		Sample ID: 1011047-02AMS				Units: mg/Kg		Analysis Date: 11/5/2010 05:33 PM		
Client ID: Found. Creek 7404		Run ID: ICPMS1_101105A				SeqNo: 1475247		Prep Date: 11/3/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.567	0.37	7.424	2.803	77.6	80-120	0			S
Cadmium	6.671	0.15	7.424	0.3227	85.5	80-120	0			
Chromium	13.62	0.37	7.424	6.816	91.6	80-120	0			
Copper	21.11	0.37	7.424	15.05	81.6	80-120	0			
Lead	22.09	0.37	7.424	13.76	112	80-120	0			
Nickel	17.02	0.37	7.424	10.84	83.2	80-120	0			
Selenium	5.88	0.37	7.424	0.8512	67.7	80-120	0			S
Silver	6.136	0.37	7.424	0.08237	81.5	80-120	0			
Zinc	51.88	0.74	7.424	47.17	63.5	80-120	0			SO

MS		Sample ID: 1011047-02AMS				Units: mg/Kg		Analysis Date: 11/8/2010 02:01 PM		
Client ID: Found. Creek 7404		Run ID: ICPMS1_101108A				SeqNo: 1476155		Prep Date: 11/3/2010		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	140.5	3.7	7.424	143.4	-39.9	80-120	0			SO

MSD		Sample ID: 1011047-02AMSD				Units: mg/Kg		Analysis Date: 11/5/2010 05:38 PM		
Client ID: Found. Creek 7404		Run ID: ICPMS1_101105A				SeqNo: 1475248		Prep Date: 11/3/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.299	0.37	7.429	2.803	74	80-120	8.567	3.18	25	S
Cadmium	6.409	0.15	7.429	0.3227	81.9	80-120	6.671	4	25	
Chromium	13.14	0.37	7.429	6.816	85.1	80-120	13.62	3.59	25	
Copper	19.96	0.37	7.429	15.05	66	80-120	21.11	5.6	25	S
Lead	20.77	0.37	7.429	13.76	94.2	80-120	22.09	6.2	25	
Nickel	16.16	0.37	7.429	10.84	71.6	80-120	17.02	5.16	25	S
Selenium	5.646	0.37	7.429	0.8512	64.5	80-120	5.88	4.05	25	S
Silver	6.028	0.37	7.429	0.08237	80	80-120	6.136	1.77	25	
Zinc	49.74	0.74	7.429	47.17	34.6	80-120	51.88	4.21	25	SO

MSD		Sample ID: 1011047-02AMSD				Units: mg/Kg		Analysis Date: 11/8/2010 02:07 PM		
Client ID: Found. Creek 7404		Run ID: ICPMS1_101108A				SeqNo: 1476156		Prep Date: 11/3/2010		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	138.9	3.7	7.429	143.4	-60.5	80-120	140.5	1.1	25	SO

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30452** Instrument ID **SVMS4** Method: **SW8270M**

MBLK Sample ID: **SBLKS1-30452-30452** Units: **µg/Kg** Analysis Date: **11/12/2010 09:52 PM**

Client ID: Run ID: **SVMS4_101112A** SeqNo: **1482326** Prep Date: **11/10/2010** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
Acenaphthene	ND	5.0								
Acenaphthylene	ND	15								
Anthracene	ND	10								
Benzo(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	20								
Benzo(b-k)fluoranthene	ND	20								
Benzo(e)pyrene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	20								
Chrysene	ND	5.0								
Dibenzo(a,h)anthracene	ND	10								
Fluoranthene	ND	15								
Fluorene	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Naphthalene	ND	15								
Perylene	ND	10								
Phenanthrene	ND	25								
Phenol	ND	5.0								
Pyrene	ND	15								
Surr: 2-Fluorobiphenyl	104.7	0	166.7	0	62.8	45-105	0			
Surr: 4-Terphenyl-d14	162.7	0	166.7	0	97.6	30-125	0			
Surr: Nitrobenzene-d5	91.33	0	166.7	0	54.8	35-100	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30452** Instrument ID **SVMS4** Method: **SW8270M**

LCS		Sample ID: SLCSS1-30452-30452				Units: µg/Kg		Analysis Date: 11/12/2010 08:33 PM		
Client ID:		Run ID: SVMS4_101112A				SeqNo: 1482324		Prep Date: 11/10/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	45.67	10	66.67	0	68.5	50-110	0			
Acenaphthene	50.33	5.0	66.67	0	75.5	35-110	0			
Acenaphthylene	44.67	15	66.67	0	67	35-115	0			
Anthracene	49.67	10	66.67	0	74.5	45-125	0			
Benzo(a)anthracene	55.67	10	66.67	0	83.5	50-105	0			
Benzo(a)pyrene	57.67	10	66.67	0	86.5	40-135	0			
Benzo(b)fluoranthene	58	20	66.67	0	87	55-120	0			
Benzo(b-k)fluoranthene	119.7	20	133.3	0	89.8	55-120	0			
Benzo(g,h,i)perylene	56	10	66.67	0	84	55-115	0			
Benzo(k)fluoranthene	61.67	20	66.67	0	92.5	55-120	0			
Chrysene	60.67	5.0	66.67	0	91	55-120	0			
Dibenzo(a,h)anthracene	55.33	10	66.67	0	83	45-115	0			
Fluoranthene	50	15	66.67	0	75	40-135	0			
Fluorene	48.33	10	66.67	0	72.5	45-105	0			
Indeno(1,2,3-cd)pyrene	54	10	66.67	0	81	55-135	0			
Naphthalene	41.67	15	66.67	0	62.5	50-110	0			
Phenanthrene	52	25	66.67	0	78	55-125	0			
Phenol	49.67	5.0	66.67	0	74.5	40-110	0			
Pyrene	55.67	15	66.67	0	83.5	50-115	0			
<i>Surr: 2-Fluorobiphenyl</i>	<i>100.3</i>	<i>0</i>	<i>166.7</i>	<i>0</i>	<i>60.2</i>	<i>45-105</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>149.3</i>	<i>0</i>	<i>166.7</i>	<i>0</i>	<i>89.6</i>	<i>30-125</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>114.3</i>	<i>0</i>	<i>166.7</i>	<i>0</i>	<i>68.6</i>	<i>35-100</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30452** Instrument ID **SVMS4** Method: **SW8270M**

LCSD		Sample ID: SLCSDS1-30452-30452				Units: µg/Kg		Analysis Date: 11/12/2010 09:13 PM		
Client ID:		Run ID: SVMS4_101112A				SeqNo: 1482325		Prep Date: 11/10/2010		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	43.67	10	66.67	0	65.5	50-110	45.67	4.48	40	
Acenaphthene	52	5.0	66.67	0	78	35-110	50.33	3.26	40	
Acenaphthylene	43.67	15	66.67	0	65.5	35-115	44.67	2.26	40	
Anthracene	47	10	66.67	0	70.5	45-125	49.67	5.52	40	
Benzo(a)anthracene	56.67	10	66.67	0	85	50-105	55.67	1.78	40	
Benzo(a)pyrene	59	10	66.67	0	88.5	40-135	57.67	2.29	40	
Benzo(b)fluoranthene	58.33	20	66.67	0	87.5	55-120	58	0.573	40	
Benzo(b-k)fluoranthene	123.3	20	133.3	0	92.5	55-120	119.7	3.02	40	
Benzo(g,h,i)perylene	57.67	10	66.67	0	86.5	55-115	56	2.93	40	
Benzo(k)fluoranthene	65	20	66.67	0	97.5	55-120	61.67	5.26	40	
Chrysene	61.67	5.0	66.67	0	92.5	55-120	60.67	1.63	40	
Dibenzo(a,h)anthracene	56.67	10	66.67	0	85	45-115	55.33	2.38	40	
Fluoranthene	50	15	66.67	0	75	40-135	50	0	40	
Fluorene	47.33	10	66.67	0	71	45-105	48.33	2.09	40	
Indeno(1,2,3-cd)pyrene	55	10	66.67	0	82.5	55-135	54	1.83	40	
Naphthalene	40	15	66.67	0	60	50-110	41.67	4.08	40	
Phenanthrene	48.67	25	66.67	0	73	55-125	52	6.62	40	
Phenol	47.33	5.0	66.67	0	71	40-110	49.67	4.81	40	
Pyrene	56	15	66.67	0	84	50-115	55.67	0.597	40	
Surr: 2-Fluorobiphenyl	102	0	166.7	0	61.2	45-105	100.3	1.65	40	
Surr: 4-Terphenyl-d14	144.7	0	166.7	0	86.8	30-125	149.3	3.17	40	
Surr: Nitrobenzene-d5	108.3	0	166.7	0	65	35-100	114.3	5.39	40	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30452** Instrument ID **SVMS4** Method: **SW8270M**

MS		Sample ID: 1011086-01A MS				Units: µg/Kg		Analysis Date: 11/13/2010 12:41 PM		
Client ID:		Run ID: SVMS4_101112A				SeqNo: 1482341		Prep Date: 11/10/2010		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	53.25	100	66.56	2.237	76.6	50-110	0			J
Acenaphthene	33.28	50	66.56	0	50	35-110	0			J
Acenaphthylene	ND	150	66.56	0	0	35-115	0			S
Anthracene	59.91	100	66.56	0.6391	89	45-125	0			J
Benzo(a)anthracene	73.22	100	66.56	3.515	105	50-105	0			J
Benzo(a)pyrene	73.22	100	66.56	1.917	107	40-135	0			J
Benzo(b)fluoranthene	66.56	200	66.56	5.433	91.8	55-120	0			J
Benzo(b-k)fluoranthene	123.1	200	133.1	5.433	88.4	55-120	0			J
Benzo(g,h,i)perylene	56.58	100	66.56	1.917	82.1	55-115	0			J
Benzo(k)fluoranthene	56.58	200	66.56	0	85	55-120	0			J
Chrysene	63.24	50	66.56	1.917	92.1	55-120	0			
Fluoranthene	69.89	150	66.56	3.835	99.2	40-135	0			J
Fluorene	53.25	100	66.56	0.3196	79.5	45-105	0			J
Indeno(1,2,3-cd)pyrene	63.24	100	66.56	0.9587	93.6	55-135	0			J
Naphthalene	39.94	150	66.56	1.917	57.1	50-110	0			J
Phenanthrene	ND	250	66.56	2.876	-4.32	55-125	0			S
Phenol	46.6	50	66.56	1.598	67.6	40-110	0			J
Pyrene	66.56	150	66.56	7.03	89.4	50-115	0			J
<i>Surr: 2-Fluorobiphenyl</i>	<i>113.2</i>	<i>0</i>	<i>166.4</i>	<i>0</i>	<i>68</i>	<i>45-105</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>129.8</i>	<i>0</i>	<i>166.4</i>	<i>0</i>	<i>78</i>	<i>30-125</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>113.2</i>	<i>0</i>	<i>166.4</i>	<i>0</i>	<i>68</i>	<i>35-100</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30452** Instrument ID **SVMS4** Method: **SW8270M**

MSD	Sample ID: 1011086-01A MSD				Units: µg/Kg		Analysis Date: 11/13/2010 01:20 AM			
Client ID:		Run ID: SVMS4_101112A			SeqNo:1482327		Prep Date: 11/10/2010		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	54.42	96	64.02	2.237	81.5	50-110	53.25	0	40	J
Acenaphthene	35.21	48	64.02	0	55	35-110	33.28	0	40	J
Acenaphthylene	ND	140	64.02	0	0	35-115	46.6	0	40	S
Anthracene	60.82	96	64.02	0.6391	94	45-125	59.91	0	40	J
Benzo(a)anthracene	67.22	96	64.02	3.515	99.5	50-105	73.22	0	40	J
Benzo(a)pyrene	73.63	96	64.02	1.917	112	40-135	73.22	0	40	J
Benzo(b)fluoranthene	64.02	190	64.02	5.433	91.5	55-120	66.56	0	40	J
Benzo(b-k)fluoranthene	124.8	190	128	5.433	93.3	55-120	123.1	0	40	J
Benzo(g,h,i)perylene	54.42	96	64.02	1.917	82	55-115	56.58	0	40	J
Benzo(k)fluoranthene	60.82	190	64.02	0	95	55-120	56.58	0	40	J
Chrysene	57.62	48	64.02	1.917	87	55-120	63.24	9.29	40	
Dibenzo(a,h)anthracene	67.22	96	64.02	1.278	103	45-115	63.24	0	40	J
Fluoranthene	73.63	140	64.02	3.835	109	40-135	69.89	0	40	J
Fluorene	54.42	96	64.02	0.3196	84.5	45-105	53.25	0	40	J
Indeno(1,2,3-cd)pyrene	64.02	96	64.02	0.9587	98.5	55-135	63.24	0	40	J
Naphthalene	38.41	140	64.02	1.917	57	50-110	39.94	0	40	J
Phenanthrene	ND	240	64.02	2.876	-4.49	55-125	66.56	0	40	S
Phenol	44.82	48	64.02	1.598	67.5	40-110	46.6	0	40	J
Pyrene	67.22	140	64.02	7.03	94	50-115	66.56	0	40	J
Surr: 2-Fluorobiphenyl	182.5	0	160.1	0	114	45-105	113.2	46.9	40	SR
Surr: 4-Terphenyl-d14	281.7	0	160.1	0	176	30-125	129.8	73.8	40	SR
Surr: Nitrobenzene-d5	211.3	0	160.1	0	132	35-100	113.2	60.5	40	SR

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **R83475** Instrument ID **VMS8** Method: **SW8260**

MBLK	Sample ID: VBLKW1-101107-R83475				Units: µg/L		Analysis Date: 11/7/2010 11:43 AM			
Client ID:	Run ID: VMS8_101107A				SeqNo: 1475028		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	2.0								

LCS	Sample ID: VLCSW1-101107-R83475				Units: µg/L		Analysis Date: 11/7/2010 10:28 AM			
Client ID:	Run ID: VMS8_101107A				SeqNo: 1474991		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.92	1.0	20	0	94.6	80-120	0			
Ethylbenzene	19.14	1.0	20	0	95.7	75-125	0			
m,p-Xylene	38.63	2.0	40	0	96.6	75-130	0			
o-Xylene	19.1	1.0	20	0	95.5	80-120	0			
Toluene	18.77	1.0	20	0	93.8	75-120	0			
Xylenes, Total	57.73	2.0	60	0	96.2	75-130	0			

LCSD	Sample ID: VLCSDW1-101107-R83475				Units: µg/L		Analysis Date: 11/7/2010 10:53 AM			
Client ID:	Run ID: VMS8_101107A				SeqNo: 1474992		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.35	1.0	20	0	91.8	80-120	18.92	3.06	30	
Ethylbenzene	18.17	1.0	20	0	90.8	75-125	19.14	5.2	30	
m,p-Xylene	36.93	2.0	40	0	92.3	75-130	38.63	4.5	30	
o-Xylene	18.17	1.0	20	0	90.8	80-120	19.1	4.99	30	
Toluene	18.07	1.0	20	0	90.4	75-120	18.77	3.8	30	
Xylenes, Total	55.1	2.0	60	0	91.8	75-130	57.73	4.66	30	

MS	Sample ID: 1011083-13C MS				Units: µg/L		Analysis Date: 11/7/2010 08:30 PM			
Client ID:	Run ID: VMS8_101107A				SeqNo: 1475046		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.24	1.0	20	0	96.2	80-120	0			
Ethylbenzene	19.48	1.0	20	0	97.4	75-125	0			
m,p-Xylene	39.68	2.0	40	0	99.2	75-130	0			
o-Xylene	19.65	1.0	20	0	98.2	80-120	0			
Toluene	19.76	1.0	20	0	98.8	75-120	0			
Xylenes, Total	59.33	2.0	60	0	98.9	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **R83475** Instrument ID **VMS8** Method: **SW8260**

MSD	Sample ID: 1011083-13C MSD				Units: µg/L			Analysis Date: 11/7/2010 08:55 PM		
Client ID:	Run ID: VMS8_101107A				SeqNo: 1475047		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.64	1.0	20	0	93.2	80-120	19.24	3.17	30	
Ethylbenzene	19.18	1.0	20	0	95.9	75-125	19.48	1.55	30	
m,p-Xylene	38.51	2.0	40	0	96.3	75-130	39.68	2.99	30	
o-Xylene	19.44	1.0	20	0	97.2	80-120	19.65	1.07	30	
Toluene	19.43	1.0	20	0	97.2	75-120	19.76	1.68	30	
Xylenes, Total	57.95	2.0	60	0	96.6	75-130	59.33	2.35	30	

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **30436** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK	Sample ID: MBLK-30436-30436				Units: mg/Kg		Analysis Date: 11/8/2010			
Client ID:	Run ID: WETCHEM_101108G				SeqNo: 1476189		Prep Date: 11/5/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.49								

LCS	Sample ID: LCS-30436-30436				Units: mg/Kg		Analysis Date: 11/8/2010			
Client ID:	Run ID: WETCHEM_101108G				SeqNo: 1476187		Prep Date: 11/5/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.043	0.49	1.961		0	104	75-110	0		

LCSD	Sample ID: LCSD-30436-30436				Units: mg/Kg		Analysis Date: 11/8/2010			
Client ID:	Run ID: WETCHEM_101108G				SeqNo: 1476188		Prep Date: 11/5/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.781	0.50	1.992		0	89.4	75-110	2.043	13.7	20

MS	Sample ID: 1011085-02A MS				Units: mg/Kg		Analysis Date: 11/8/2010			
Client ID:	Run ID: WETCHEM_101108G				SeqNo: 1476185		Prep Date: 11/5/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.49	1.976	0.1508	-7.63	60-130		0		S

MSD	Sample ID: 1011085-02A MSD				Units: mg/Kg		Analysis Date: 11/8/2010			
Client ID:	Run ID: WETCHEM_101108G				SeqNo: 1476186		Prep Date: 11/5/2010		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50	1.984	0.1508	-7.6	60-130	0.09881	0	30	S

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions
Work Order: 1011047
Project: Encana Pit Closure 10-418

QC BATCH REPORT

Batch ID: **R83332** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS1-101102A-R83332				Units: % of sample			Analysis Date: 11/2/2010 02:30 PM		
Client ID:	Run ID: MOIST_101102A				SeqNo: 1472221		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.010								

DUP	Sample ID: 1010805-07B DUP				Units: % of sample			Analysis Date: 11/2/2010 02:30 PM		
Client ID:	Run ID: MOIST_101102A				SeqNo: 1472209		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	36.4	0.010	0	0	0	0-0	36.9	1.36	20	

DUP	Sample ID: 1011047-02A DUP				Units: % of sample			Analysis Date: 11/2/2010 02:30 PM		
Client ID: Found. Creek 7404	Run ID: MOIST_101102A				SeqNo: 1472219		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	21.2	0.010	0	0	0	0-0	20.7	2.39	20	

The following samples were analyzed in this batch:

1011047-01A	1011047-02A	1011047-03A
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 02-Nov-10 09:15

Work Order: 1011047

Received by: DS

Checklist completed by Diane Shaw 02-Nov-10
eSignature Date

Reviewed by: Ann Preston 15-Nov-10
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.6 c</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER
#

1011047

PROJECT NAME	Encana Pit Closure	SAMPLER	Kate Ramsay		DATE	10.11.10		PAGE	1 of 1		
PROJECT No.	10-418	SITE ID			TURNAROUND	Standard		DISPOSAL	By Lab or Return to Client		
COMPANY NAME	HRL COMPLIANCE SOLUTIONS	EDD FORMAT			BTEX GRO DRO Total Metals (See Comments) Semi-Vols (PAH)						
SEND REPORT TO	Herman Lucero	PURCHASE ORDER									
ADDRESS	744 Horizon Ct. #140	BILL TO COMPANY	HRL Compliance Solutions								
CITY / STATE / ZIP	Grand Junction, CO 81501	INVOICE ATTN TO	Herman Lucero								
PHONE	970.243.3271	ADDRESS	"								
FAX	970.243.3280	CITY / STATE / ZIP									
E-MAIL	hlucero@hrrcomp.com	PHONE									
		FAX									
		E-MAIL									
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC				
	Evac. Creek 7607	S	10.18.10	3:30	3	C40		X	X	X	X
	Found. Creek	S	10.18.10		3			X	X	X	X
	Found. Creek 7404	S	10.28.10	11:20	3			X	X	X	X
	Evac. Creek 7605	S	10.18.10	9:30	3			X	X	X	X

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: For Metals run COGCC 910-1 suite. Report total Barium & do not run boron	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Kate Ramsay	Kate Ramsay	11.1.10	5 PM
RECEIVED BY	Diane F. Shaw	Diane F. Shaw	11/2/10	0915
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

FedEx Express US Airbill

FedEx Tracking Number

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Form ID No.

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1 From
Date 11-1-10 Sender's FedEx Account Number

Sender's Name KATE RAMSAY Phone 970-270-8851

Company H2L Compliance Solutions, INC.

Address 7414 Horizon Ct. # 1110

City Grand Junction, State CO ZIP 81501

2 Your Internal Billing Reference

3 To Recipient's Name Samples Receiving Phone 970-377-11070

Company ALS Group

Address 3352 128th Ave

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Use this line for the HOLD location address or for continuation of your shipping address.

City Holland State MI ZIP 49424

01 HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.

31 HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.

4a Express Package Service

* To most locations.

Packages up to 150 lbs.

- 01 ☒ FedEx Priority Overnight
Next business morning.* Friday
shipments will be delivered on Monday
unless SATURDAY Delivery is selected.
- 05 ☐ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.
- 06 ☐ FedEx First Overnight
Earliest next business morning
delivery to select locations.*
- 03 ☐ FedEx 2Day
Second business day.* Thursday
shipments will be delivered on Monday
unless SATURDAY Delivery is selected.
- 20 ☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

4b Express Freight Service

** To most locations.

Packages over 150 lbs.

- 70 ☐ FedEx 1Day Freight
Next business day.** Friday shipments will
be delivered on Monday unless SATURDAY
Delivery is selected.
- 80 ☐ FedEx 2Day Freight
Second business day.** Thursday shipments will be delivered
on Monday unless SATURDAY Delivery is selected.
- 83 ☐ FedEx 3Day Freight
Third business day.** Saturday Delivery NOT available.

5 Packaging

* Declared value limit \$500.

- 06 ☐ FedEx Envelope* 02 ☐ FedEx Pak*
Includes FedEx Small Pak and
FedEx Large Pak.
- 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 SATURDAY DELIVERY

- ☐ No Signature Required
Package may be left without
obtaining a signature for delivery.
- 10 ☐ Direct Signature
Someone at recipient's address
may sign for delivery. Fee applies.
- 34 ☐ Indirect Signature
If no one is available at recipient's
address, someone at a neighboring
address may sign for delivery. For
residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

- One box must be checked.
- ☒ No 04 ☐ Yes
As per attached
Shipper's Declaration.
- ☐ Shipper's Declaration
not required.
- 06 ☐ Dry Ice
Dry Ice, 9 UN 1845 x kg
- Dangerous goods (including dry ice) cannot be shipped in FedEx packaging
or placed in a FedEx Express Drop Box.
- ☐ Cargo Aircraft Only

7 Payment Bill to:

- 1 ☐ Sender
Acct. No. in Section
I will be billed.
- 2 ☒ Recipient
- 3 ☐ Third Party
- 4 ☐ Credit Card
- 5 ☐ Cash/Check

Total Packages 1

Total Weight 30 lbs.

Credit Card Auth.

Your liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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Chain-of-Custody

Form 202r8

WORKORDER
#

1011047

PROJECT NAME	Encana Pit Closure	SAMPLER	Kate Ramsay		DATE	10.11.10		PAGE	1 of 1				
PROJECT No.	10-418	SITE ID			TURNAROUND	Standard		DISPOSAL	By Lab or Return to Client				
COMPANY NAME	HRL COMPLIANCE SOLUTIONS	EDD FORMAT			BTEX GRO DRO Total Metals (See Comments) Semi-Vols (PAH)								
SEND REPORT TO	Herman Lucero	PURCHASE ORDER											
ADDRESS	744 Horizon Ct. #140	BILL TO COMPANY	HRL Compliance Solutions										
CITY / STATE / ZIP	Grand Junction, CO 81501	INVOICE ATTN TO	Herman Lucero										
PHONE	970.243.3271	ADDRESS	"										
FAX	970.243.3280	CITY / STATE / ZIP											
E-MAIL	hlucero@hrrcomp.com	PHONE											
		FAX											
		E-MAIL											
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC						
	Evac. Creek 7607	S	10.18.10	3:30	3	C40		X	X	X	X	X	
	Found. Creek	S	10.18.10		3			X	X	X	X	X	
	Found. Creek 7404	S	10.28.10	11:20	3			X	X	X	X	X	
	Evac. Creek 7605	S	10.18.10	9:30	3			X	X	X	X	X	

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: For Metals run COGCC 910-1 suite. Report total Barium & do not run boron	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Kate Ramsay	Kate Ramsay	11.1.10	5 PM
RECEIVED BY	Diane F. Shaw	Diane F. Shaw	11/2/10	0915
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

FedEx Express US Airbill

FedEx Tracking Number

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0200

Form ID No.

FedEx Retrieval Copy

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1 From
Date 11-1-10 Sender's FedEx Account Number

Sender's Name KATE RAMSAY Phone 970-270-8851

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Address 7414 Horizon Ct. # 1110

City Grand Junction, State CO ZIP 81501

2 Your Internal Billing Reference

3 To Recipient's Name Samples Receiving Phone 970-377-11070

Company ALS Group

Address 3352 128th Ave

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Use this line for the HOLD location address or for continuation of your shipping address.

City Holland State MI ZIP 49424

01 HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.

31 HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.

4a Express Package Service

* To most locations.

Packages up to 150 lbs.

- 01 ☒ FedEx Priority Overnight
Next business morning.* Friday
shipments will be delivered on Monday
unless SATURDAY Delivery is selected.
- 05 ☐ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.
- 06 ☐ FedEx First Overnight
Earliest next business morning
delivery to select locations.*
- 03 ☐ FedEx 2Day
Second business day.* Thursday
shipments will be delivered on Monday
unless SATURDAY Delivery is selected.
- 20 ☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

4b Express Freight Service

** To most locations.

Packages over 150 lbs.

- 70 ☐ FedEx 1Day Freight
Next business day.** Friday shipments will
be delivered on Monday unless SATURDAY
Delivery is selected.
- 80 ☐ FedEx 2Day Freight
Second business day.** Thursday shipments will be delivered
on Monday unless SATURDAY Delivery is selected.
- 83 ☐ FedEx 3Day Freight
Third business day.** Saturday Delivery NOT available.

5 Packaging

* Declared value limit \$500.

- 06 ☐ FedEx Envelope* 02 ☐ FedEx Pak*
Includes FedEx Small Pak and
FedEx Large Pak.
- 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 SATURDAY DELIVERY

- ☐ No Signature Required
Package may be left without
obtaining a signature for delivery.
- 10 ☐ Direct Signature
Someone at recipient's address
may sign for delivery. Fee applies.
- 34 ☐ Indirect Signature
If no one is available at recipient's
address, someone at a neighboring
address may sign for delivery. For
residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

- One box must be checked.
- ☒ No 04 ☐ Yes
As per attached
Shipper's Declaration.
- ☐ Shipper's Declaration
not required.
- 06 ☐ Dry Ice
Dry Ice, 9 UN 1845 x kg
- Dangerous goods (including dry ice) cannot be shipped in FedEx packaging
or placed in a FedEx Express Drop Box.
- ☐ Cargo Aircraft Only

7 Payment Bill to:

- 1 ☐ Sender
Acct. No. in Section
I will be billed.
- 2 ☒ Recipient
- 3 ☐ Third Party
- 4 ☐ Credit Card
- 5 ☐ Cash/Check

Total Packages 1

Total Weight 30 lbs.

Credit Card Auth.

Your liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Kate Ramsay
HRL Compliance Solutions- CO
744 Horizon Ct., Suite 140
Grand Junction, CO 81506

Report Summary

Thursday August 11, 2011

Report Number: L529154

Samples Received: 08/03/11

Client Project:

Description: Pit Closure Project

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

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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

Kate Ramsay
HRL Compliance Solutions- CO
744 Horizon Ct., Suite 140
Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-SPOILS-080211 12FT
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:20

ESC Sample # : L529154-01

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	08/06/11	1
Chromium, Trivalent	11.	0.50	mg/kg	Calc.	08/04/11	1
ORP	150		mV	2580	08/03/11	1
pH	8.4		su	9045D	08/04/11	1
Sodium Adsorption Ratio	20.			Calc.	08/06/11	1
Specific Conductance	1000		umhos/cm	9050AMod	08/03/11	1
Mercury	BDL	0.020	mg/kg	7471	08/05/11	1
Arsenic	6.2	1.0	mg/kg	6010B	08/04/11	1
Barium	150	0.25	mg/kg	6010B	08/04/11	1
Cadmium	BDL	0.25	mg/kg	6010B	08/04/11	1
Chromium	11.	0.50	mg/kg	6010B	08/04/11	1
Copper	13.	1.0	mg/kg	6010B	08/04/11	1
Lead	8.7	0.25	mg/kg	6010B	08/04/11	1
Nickel	11.	1.0	mg/kg	6010B	08/04/11	1
Selenium	BDL	1.0	mg/kg	6010B	08/04/11	1
Silver	BDL	0.50	mg/kg	6010B	08/04/11	1
Zinc	39.	1.5	mg/kg	6010B	08/04/11	1
Benzene	BDL	0.0025	mg/kg	8021/8015	08/04/11	5
Toluene	BDL	0.025	mg/kg	8021/8015	08/04/11	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	08/04/11	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	08/04/11	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	08/04/11	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	08/04/11	5
a,a,a-Trifluorotoluene(PID)	98.6		% Rec.	8021/8015	08/04/11	5
TPH (GC/FID) High Fraction	8.7	4.0	mg/kg	3546/DRO	08/10/11	1
Surrogate recovery(%)						
o-Terphenyl	55.5		% Rec.	3546/DRO	08/10/11	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L529154-01 (PH) - 8.4@21.2c



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Kate Ramsay
HRL Compliance Solutions- CO
744 Horizon Ct., Suite 140
Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-SPOILS-080211 12FT
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:20

ESC Sample # : L529154-01

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Naphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
1-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
2-Methylnaphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
2-Chloronaphthalene	BDL	0.0060	mg/kg	8270C-SIM	08/05/11	1
Surrogate Recovery						
Nitrobenzene-d5	74.3		% Rec.	8270C-SIM	08/05/11	1
2-Fluorobiphenyl	73.0		% Rec.	8270C-SIM	08/05/11	1
p-Terphenyl-d14	74.6		% Rec.	8270C-SIM	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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L529154-01 (PH) - 8.4@21.2c



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REPORT OF ANALYSIS

Kate Ramsay
HRL Compliance Solutions- CO
744 Horizon Ct., Suite 140
Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-BG1-080211 6IN
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:00

ESC Sample # : L529154-02

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	8.0	1.0	mg/kg	6010B	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Kate Ramsay
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744 Horizon Ct., Suite 140
Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-BG2-080211 6IN
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:10

ESC Sample # : L529154-03

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	2.8	1.0	mg/kg	6010B	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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744 Horizon Ct., Suite 140
Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-BG3-080211 6IN
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:20

ESC Sample # : L529154-04

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.9	1.0	mg/kg	6010B	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-BG4-080211 6IN
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:30

ESC Sample # : L529154-05

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	7.6	1.0	mg/kg	6010B	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Grand Junction, CO 81506

August 11, 2011

Date Received : August 03, 2011
Description : Pit Closure Project
Sample ID : 7605-BG5-080211 6IN
Collected By : Kate Ramsay
Collection Date : 08/02/11 12:40

ESC Sample # : L529154-06

Site ID : EC 7605

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	6.9	1.0	mg/kg	6010B	08/05/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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August 11, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Specific Conductance	2.20	umhos/cm			WG548842	08/03/11 22:13
Benzene	< .0005	mg/kg			WG548793	08/04/11 05:22
Ethylbenzene	< .0005	mg/kg			WG548793	08/04/11 05:22
Toluene	< .005	mg/kg			WG548793	08/04/11 05:22
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG548793	08/04/11 05:22
Total Xylene	< .0015	mg/kg			WG548793	08/04/11 05:22
a,a,a-Trifluorotoluene(FID)		% Rec.	102.4	59-128	WG548793	08/04/11 05:22
a,a,a-Trifluorotoluene(PID)		% Rec.	100.6	54-144	WG548793	08/04/11 05:22
pH	4.80	su			WG548847	08/04/11 16:15
Arsenic	< 1	mg/kg			WG548818	08/04/11 19:10
Barium	< .25	mg/kg			WG548818	08/04/11 19:10
Cadmium	< .25	mg/kg			WG548818	08/04/11 19:10
Chromium	< .5	mg/kg			WG548818	08/04/11 19:10
Copper	< 1	mg/kg			WG548818	08/04/11 19:10
Lead	< .25	mg/kg			WG548818	08/04/11 19:10
Nickel	< 1	mg/kg			WG548818	08/04/11 19:10
Selenium	< 1	mg/kg			WG548818	08/04/11 19:10
Silver	< .5	mg/kg			WG548818	08/04/11 19:10
Zinc	< 1.5	mg/kg			WG548818	08/04/11 19:10
Mercury	< .02	mg/kg			WG548896	08/05/11 03:17
Arsenic	< 1	mg/kg			WG548824	08/05/11 13:50
1-Methylnaphthalene	< .006	mg/kg			WG549034	08/05/11 11:11
2-Chloronaphthalene	< .006	mg/kg			WG549034	08/05/11 11:11
2-Methylnaphthalene	< .006	mg/kg			WG549034	08/05/11 11:11
Acenaphthene	< .006	mg/kg			WG549034	08/05/11 11:11
Acenaphthylene	< .006	mg/kg			WG549034	08/05/11 11:11
Anthracene	< .006	mg/kg			WG549034	08/05/11 11:11
Benzo(a)anthracene	< .006	mg/kg			WG549034	08/05/11 11:11
Benzo(a)pyrene	< .006	mg/kg			WG549034	08/05/11 11:11
Benzo(b)fluoranthene	< .006	mg/kg			WG549034	08/05/11 11:11
Benzo(g,h,i)perylene	< .006	mg/kg			WG549034	08/05/11 11:11
Benzo(k)fluoranthene	< .006	mg/kg			WG549034	08/05/11 11:11
Chrysene	< .006	mg/kg			WG549034	08/05/11 11:11
Dibenz(a,h)anthracene	< .006	mg/kg			WG549034	08/05/11 11:11
Fluoranthene	< .006	mg/kg			WG549034	08/05/11 11:11
Fluorene	< .006	mg/kg			WG549034	08/05/11 11:11
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG549034	08/05/11 11:11
Naphthalene	< .006	mg/kg			WG549034	08/05/11 11:11
Phenanthrene	< .006	mg/kg			WG549034	08/05/11 11:11
Pyrene	< .006	mg/kg			WG549034	08/05/11 11:11
2-Fluorobiphenyl		% Rec.	65.95	34-129	WG549034	08/05/11 11:11
Nitrobenzene-d5		% Rec.	66.55	14-141	WG549034	08/05/11 11:11
p-Terphenyl-d14		% Rec.	74.27	25-139	WG549034	08/05/11 11:11
Chromium,Hexavalent	< 2	mg/kg			WG549075	08/06/11 15:40

* 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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Quality Assurance Report
Level II

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August 11, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	ppm			WG549702	08/10/11 11:12
o-Terphenyl		% Rec.	77.66	50-150	WG549702	08/10/11 11:12

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Specific Conductance	umhos/cm	2500	2200	12.8	20	L528658-01	WG548842
Specific Conductance	umhos/cm	2700	3200	16.9	20	L529021-07	WG548842
ORP	mV	150.	150.	2.70	20	L529021-07	WG548845
pH	su	7.60	7.40	2.67*	1	L528811-03	WG548847
pH	su	8.40	8.40	0	1	L529193-01	WG548847
Arsenic	mg/kg	4.60	4.70	2.15	20	L529156-04	WG548818
Barium	mg/kg	47.0	43.0	8.04	20	L529156-04	WG548818
Cadmium	mg/kg	0	0	0	20	L529156-04	WG548818
Chromium	mg/kg	23.0	20.0	12.6	20	L529156-04	WG548818
Copper	mg/kg	12.0	11.2	6.90	20	L529156-04	WG548818
Lead	mg/kg	2.10	1.80	15.4	20	L529156-04	WG548818
Nickel	mg/kg	27.0	23.2	16.2	20	L529156-04	WG548818
Selenium	mg/kg	0	0	0	20	L529156-04	WG548818
Silver	mg/kg	0	0	0	20	L529156-04	WG548818
Zinc	mg/kg	30.0	25.6	16.5	20	L529156-04	WG548818
Mercury	mg/kg	0.00760	0.00610	21.9*	20	L529156-02	WG548896
Arsenic	mg/kg	4.30	6.20	36.0*	20	L529148-02	WG548824
Chromium,Hexavalent	mg/kg	1.40	1.60	13.3	20	L529193-01	WG549075
Chromium,Hexavalent	mg/kg	0	0	0	20	L528811-03	WG549075

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Specific Conductance	umhos/cm	427	430.	101.	85-115	WG548842
ORP	mV	229	220.	96.1	95.6-104.37	WG548845
Benzene	mg/kg	.05	0.0497	99.3	76-113	WG548793
Ethylbenzene	mg/kg	.05	0.0504	101.	78-115	WG548793
Toluene	mg/kg	.05	0.0506	101.	76-114	WG548793
Total Xylene	mg/kg	.15	0.151	101.	81-118	WG548793
a,a,a-Trifluorotoluene(FID)				102.2	59-128	WG548793
a,a,a-Trifluorotoluene(PID)				98.30	54-144	WG548793
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.19	94.4	67-135	WG548793
a,a,a-Trifluorotoluene(FID)				105.7	59-128	WG548793
a,a,a-Trifluorotoluene(PID)				104.3	54-144	WG548793

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Quality Assurance Report
Level II

L529154

August 11, 2011

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
pH	su	9.04	8.90	98.5	98-101	WG548847
Arsenic	mg/kg	192	169.	88.0	78.6-120.8	WG548818
Barium	mg/kg	420	380.	90.5	78.8-121.4	WG548818
Cadmium	mg/kg	70.1	69.8	99.6	78.5-121.5	WG548818
Chromium	mg/kg	168	162.	96.4	80.4-120.2	WG548818
Copper	mg/kg	122	120.	98.4	81.6-119.7	WG548818
Lead	mg/kg	113	101.	89.4	77.3-122.1	WG548818
Nickel	mg/kg	74.1	69.0	93.1	78.8-121.2	WG548818
Selenium	mg/kg	176	153.	86.9	75.6-125.0	WG548818
Silver	mg/kg	115	110.	95.7	66-133.9	WG548818
Zinc	mg/kg	437	421.	96.3	78.5-121.7	WG548818
Mercury	mg/kg	8.77	7.46	85.1	71.6-127.7	WG548896
Arsenic	mg/kg	192	176.	91.7	78.6-120.8	WG548824
1-Methylnaphthalene	mg/kg	.033	0.0231	70.1	48-113	WG549034
2-Chloronaphthalene	mg/kg	.033	0.0237	72.0	51-114	WG549034
2-Methylnaphthalene	mg/kg	.033	0.0217	65.7	44-109	WG549034
Acenaphthene	mg/kg	.033	0.0261	79.1	52-108	WG549034
Acenaphthylene	mg/kg	.033	0.0246	74.6	51-110	WG549034
Anthracene	mg/kg	.033	0.0258	78.3	58-120	WG549034
Benzo(a)anthracene	mg/kg	.033	0.0299	90.5	54-110	WG549034
Benzo(a)pyrene	mg/kg	.033	0.0278	84.3	56-118	WG549034
Benzo(b)fluoranthene	mg/kg	.033	0.0292	88.6	55-114	WG549034
Benzo(g,h,i)perylene	mg/kg	.033	0.0272	82.3	48-130	WG549034
Benzo(k)fluoranthene	mg/kg	.033	0.0278	84.2	55-122	WG549034
Chrysene	mg/kg	.033	0.0265	80.4	57-118	WG549034
Dibenz(a,h)anthracene	mg/kg	.033	0.0275	83.4	53-122	WG549034
Fluoranthene	mg/kg	.033	0.0266	80.5	58-118	WG549034
Fluorene	mg/kg	.033	0.0270	81.9	54-109	WG549034
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0269	81.5	51-125	WG549034
Naphthalene	mg/kg	.033	0.0222	67.4	45-105	WG549034
Phenanthrene	mg/kg	.033	0.0240	72.6	53-114	WG549034
Pyrene	mg/kg	.033	0.0262	79.5	53-121	WG549034
2-Fluorobiphenyl				73.23	34-129	WG549034
Nitrobenzene-d5				73.67	14-141	WG549034
p-Terphenyl-d14				81.29	25-139	WG549034
Chromium, Hexavalent	mg/kg	132	99.4	75.3	50-150	WG549075
TPH (GC/FID) High Fraction	ppm	60	53.1	88.5	50-150	WG549702
o-Terphenyl				77.67	50-150	WG549702

Analyte	Units	Laboratory Control Result	Sample Duplicate Ref	%Rec	Limit	RPD	Limit	Batch
Specific Conductance	umhos/	430.	430.	101.	85-115	0	20	WG548842
ORP	mV	220.	220.	96.0	95.6-104.37	0	20	WG548845

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Quality Assurance Report
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Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Benzene	mg/kg	0.0478	0.0497	96.0		76-113	3.78	20	WG548793
Ethylbenzene	mg/kg	0.0480	0.0504	96.0		78-115	4.73	20	WG548793
Toluene	mg/kg	0.0481	0.0506	96.0		76-114	5.05	20	WG548793
Total Xylene	mg/kg	0.144	0.151	96.0		81-118	4.76	20	WG548793
a,a,a-Trifluorotoluene(FID)				101.7		59-128			WG548793
a,a,a-Trifluorotoluene(PID)				97.87		54-144			WG548793
TPH (GC/FID) Low Fraction	mg/kg	5.28	5.19	96.0		67-135	1.66	20	WG548793
a,a,a-Trifluorotoluene(FID)				105.4		59-128			WG548793
a,a,a-Trifluorotoluene(PID)				103.5		54-144			WG548793
pH	su	8.90	8.90	98.0		98-101	0	20	WG548847
1-Methylnaphthalene	mg/kg	0.0248	0.0231	75.0		48-113	6.87	24	WG549034
2-Chloronaphthalene	mg/kg	0.0240	0.0237	73.0		51-114	1.22	24	WG549034
2-Methylnaphthalene	mg/kg	0.0242	0.0217	73.0		44-109	11.2	24	WG549034
Acenaphthene	mg/kg	0.0265	0.0261	80.0		52-108	1.56	22	WG549034
Acenaphthylene	mg/kg	0.0261	0.0246	79.0		51-110	5.86	21	WG549034
Anthracene	mg/kg	0.0285	0.0258	86.0		58-120	9.84	20	WG549034
Benzo(a)anthracene	mg/kg	0.0294	0.0299	89.0		54-110	1.48	22	WG549034
Benzo(a)pyrene	mg/kg	0.0293	0.0278	89.0		56-118	5.04	21	WG549034
Benzo(b)fluoranthene	mg/kg	0.0297	0.0292	90.0		55-114	1.72	20	WG549034
Benzo(g,h,i)perylene	mg/kg	0.0294	0.0272	89.0		48-130	8.03	20	WG549034
Benzo(k)fluoranthene	mg/kg	0.0304	0.0278	92.0		55-122	9.01	25	WG549034
Chrysene	mg/kg	0.0295	0.0265	89.0		57-118	10.6	20	WG549034
Dibenz(a,h)anthracene	mg/kg	0.0291	0.0275	88.0		53-122	5.56	20	WG549034
Fluoranthene	mg/kg	0.0282	0.0266	85.0		58-118	5.82	20	WG549034
Fluorene	mg/kg	0.0280	0.0270	85.0		54-109	3.49	20	WG549034
Indeno(1,2,3-cd)pyrene	mg/kg	0.0289	0.0269	88.0		51-125	7.32	21	WG549034
Naphthalene	mg/kg	0.0234	0.0222	71.0		45-105	5.12	24	WG549034
Phenanthrene	mg/kg	0.0263	0.0240	80.0		53-114	9.44	20	WG549034
Pyrene	mg/kg	0.0284	0.0262	86.0		53-121	7.86	20	WG549034
2-Fluorobiphenyl				75.60		34-129			WG549034
Nitrobenzene-d5				71.29		14-141			WG549034
p-Terphenyl-d14				80.37		25-139			WG549034
Chromium,Hexavalent	mg/kg	98.0	99.4	74.0		50-150	1.42	20	WG549075
TPH (GC/FID) High Fraction	ppm	51.0	53.1	85.0		50-150	4.11	25	WG549702
o-Terphenyl				74.14		50-150			WG549702

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Benzene	mg/kg	0.119	0	.05	47.6	32-137	L529154-01	WG548793
Ethylbenzene	mg/kg	0.144	0	.05	57.6	10-150	L529154-01	WG548793
Toluene	mg/kg	0.123	0	.05	49.2	20-142	L529154-01	WG548793
Total Xylene	mg/kg	0.507	0	.15	67.7	16-141	L529154-01	WG548793
a,a,a-Trifluorotoluene(FID)					101.2	59-128		WG548793
a,a,a-Trifluorotoluene(PID)					98.32	54-144		WG548793
TPH (GC/FID) Low Fraction	mg/kg	18.4	0	5.5	66.8	55-109	L529154-01	WG548793
a,a,a-Trifluorotoluene(FID)					106.8	59-128		WG548793
a,a,a-Trifluorotoluene(PID)					102.8	54-144		WG548793

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Analyte	Units	MS Res	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
			Ref Res						
Arsenic	mg/kg	47.1	4.70	50	84.8	75-125	L529156-04	WG548818	
Barium	mg/kg	83.0	43.0	50	80.0	75-125	L529156-04	WG548818	
Cadmium	mg/kg	46.4	0	50	92.8	75-125	L529156-04	WG548818	
Chromium	mg/kg	69.6	20.0	50	99.2	75-125	L529156-04	WG548818	
Copper	mg/kg	56.6	11.2	50	90.8	75-125	L529156-04	WG548818	
Lead	mg/kg	46.4	1.80	50	89.2	75-125	L529156-04	WG548818	
Nickel	mg/kg	65.4	23.2	50	84.4	75-125	L529156-04	WG548818	
Selenium	mg/kg	39.7	0	50	79.4	75-125	L529156-04	WG548818	
Silver	mg/kg	44.1	0	50	88.2	75-125	L529156-04	WG548818	
Zinc	mg/kg	72.2	25.6	50	93.2	75-125	L529156-04	WG548818	
Mercury	mg/kg	0.308	0.00610	.25	121.	70-130	L529156-02	WG548896	
Arsenic	mg/kg	49.4	6.20	50	86.4	75-125	L529148-02	WG548824	
1-Methylnaphthalene	mg/kg	0.0209	0	.033	63.4	25-155	L528544-06	WG549034	
2-Chloronaphthalene	mg/kg	0.0202	0	.033	61.2	31-153	L528544-06	WG549034	
2-Methylnapththalene	mg/kg	0.0210	0	.033	63.7	22-172	L528544-06	WG549034	
Acenaphthene	mg/kg	0.0216	0	.033	65.4	43-133	L528544-06	WG549034	
Acenaphthylene	mg/kg	0.0226	0	.033	68.4	42-146	L528544-06	WG549034	
Anthracene	mg/kg	0.0211	0	.033	63.9	38-153	L528544-06	WG549034	
Benzo(a)anthracene	mg/kg	0.0170	0	.033	51.6	31-142	L528544-06	WG549034	
Benzo(a)pyrene	mg/kg	0.0148	0	.033	44.8	26-152	L528544-06	WG549034	
Benzo(b)fluoranthene	mg/kg	0.0147	0	.033	44.5	10-188	L528544-06	WG549034	
Benzo(g,h,i)perylene	mg/kg	0.0144	0	.033	43.7	10-176	L528544-06	WG549034	
Benzo(k)fluoranthene	mg/kg	0.0154	0	.033	46.7	22-163	L528544-06	WG549034	
Chrysene	mg/kg	0.0171	0	.033	52.0	26-146	L528544-06	WG549034	
Dibenz(a,h)anthracene	mg/kg	0.0139	0	.033	42.2	10-160	L528544-06	WG549034	
Fluoranthene	mg/kg	0.0193	0	.033	58.4	23-160	L528544-06	WG549034	
Fluorene	mg/kg	0.0217	0	.033	65.8	44-143	L528544-06	WG549034	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0139	0	.033	42.1	10-157	L528544-06	WG549034	
Naphthalene	mg/kg	0.0254	0	.033	77.0	22-156	L528544-06	WG549034	
Phenanthrene	mg/kg	0.0200	0	.033	60.6	23-164	L528544-06	WG549034	
Pyrene	mg/kg	0.0174	0	.033	52.8	12-170	L528544-06	WG549034	
2-Fluorobiphenyl					74.13	34-129		WG549034	
Nitrobenzene-d5					87.37	14-141		WG549034	
p-Terphenyl-d14					72.43	25-139		WG549034	
Chromium, Hexavalent	mg/kg	15.2	0	20	76.0	50-150	L528811-04	WG549075	
TPH (GC/FID) High Fraction	ppm	51.3	0	60	85.6	50-150	L529080-01	WG549702	
o-Terphenyl					67.47	50-150		WG549702	

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.0870	0.119	34.8	32-137	31.0	39	L529154-01	WG548793
Ethylbenzene	mg/kg	0.146	0.144	58.5	10-150	1.62	44	L529154-01	WG548793
Toluene	mg/kg	0.0971	0.123	38.8	20-142	23.5	42	L529154-01	WG548793
Total Xylene	mg/kg	0.505	0.507	67.4	16-141	0.440	46	L529154-01	WG548793
a,a,a-Trifluorotoluene(FID)				101.2	59-128				WG548793
a,a,a-Trifluorotoluene(PID)				98.18	54-144				WG548793
TPH (GC/FID) Low Fraction	mg/kg	16.3	18.4	59.2	55-109	12.1	20	L529154-01	WG548793
a,a,a-Trifluorotoluene(FID)				106.6	59-128				WG548793

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
a,a,a-Trifluorotoluene(PID)				102.2	54-144					
Arsenic	mg/kg	49.7	47.1	90.0	75-125	5.37	20	L529156-04		WG548818
Barium	mg/kg	88.7	83.0	91.4	75-125	6.64	20	L529156-04		WG548818
Cadmium	mg/kg	49.3	46.4	98.6	75-125	6.06	20	L529156-04		WG548818
Chromium	mg/kg	70.8	69.6	102.	75-125	1.71	20	L529156-04		WG548818
Copper	mg/kg	59.1	56.6	95.8	75-125	4.32	20	L529156-04		WG548818
Lead	mg/kg	48.6	46.4	93.6	75-125	4.63	20	L529156-04		WG548818
Nickel	mg/kg	66.4	65.4	86.4	75-125	1.52	20	L529156-04		WG548818
Selenium	mg/kg	41.6	39.7	83.2	75-125	4.67	20	L529156-04		WG548818
Silver	mg/kg	47.0	44.1	94.0	75-125	6.37	20	L529156-04		WG548818
Zinc	mg/kg	73.3	72.2	95.4	75-125	1.51	20	L529156-04		WG548818
Mercury	mg/kg	0.248	0.308	96.8	70-130	21.6*	20	L529156-02		WG548896
Arsenic	mg/kg	48.6	49.4	84.8	75-125	1.63	20	L529148-02		WG548824
1-Methylnaphthalene	mg/kg	0.0210	0.0209	63.6	25-155	0.367	27	L528544-06		WG549034
2-Chloronaphthalene	mg/kg	0.0214	0.0202	65.0	31-153	6.07	22	L528544-06		WG549034
2-Methylnaphthalene	mg/kg	0.0213	0.0210	64.5	22-172	1.24	29	L528544-06		WG549034
Acenaphthene	mg/kg	0.0227	0.0216	68.7	43-133	4.87	26	L528544-06		WG549034
Acenaphthylene	mg/kg	0.0232	0.0226	70.3	42-146	2.66	22	L528544-06		WG549034
Anthracene	mg/kg	0.0225	0.0211	68.1	38-153	6.36	27	L528544-06		WG549034
Benzo(a)anthracene	mg/kg	0.0186	0.0170	56.4	31-142	8.84	31	L528544-06		WG549034
Benzo(a)pyrene	mg/kg	0.0163	0.0148	49.5	26-152	9.95	32	L528544-06		WG549034
Benzo(b)fluoranthene	mg/kg	0.0157	0.0147	47.5	10-188	6.59	33	L528544-06		WG549034
Benzo(g,h,i)perylene	mg/kg	0.0158	0.0144	47.9	10-176	9.21	30	L528544-06		WG549034
Benzo(k)fluoranthene	mg/kg	0.0175	0.0154	53.1	22-163	12.9	29	L528544-06		WG549034
Chrysene	mg/kg	0.0178	0.0171	54.0	26-146	3.87	30	L528544-06		WG549034
Dibenz(a,h)anthracene	mg/kg	0.0152	0.0139	46.0	10-160	8.58	39	L528544-06		WG549034
Fluoranthene	mg/kg	0.0203	0.0193	61.4	23-160	5.01	22	L528544-06		WG549034
Fluorene	mg/kg	0.0225	0.0217	68.2	44-143	3.58	23	L528544-06		WG549034
Indeno(1,2,3-cd)pyrene	mg/kg	0.0155	0.0139	47.1	10-157	11.2	40	L528544-06		WG549034
Naphthalene	mg/kg	0.0270	0.0254	81.8	22-156	6.11	27	L528544-06		WG549034
Phenanthrene	mg/kg	0.0215	0.0200	65.1	23-164	7.19	25	L528544-06		WG549034
Pyrene	mg/kg	0.0188	0.0174	56.8	12-170	7.41	24	L528544-06		WG549034
2-Fluorobiphenyl				74.43	34-129					WG549034
Nitrobenzene-d5				84.02	14-141					WG549034
p-Terphenyl-d14				78.15	25-139					WG549034
Chromium,Hexavalent	mg/kg	14.9	15.2	74.5	50-150	1.99	20	L528811-04		WG549075
TPH (GC/FID) High Fraction	ppm	48.7	51.3	81.2	50-150	5.26	25	L529080-01		WG549702
o-Terphenyl				67.00	50-150					WG549702

Batch number /Run number / Sample number cross reference

WG548842: R1802532: L529154-01
WG548845: R1802550: L529154-01
WG548793: R1803350: L529154-01
WG548847: R1803510: L529154-01
WG548818: R1804031: L529154-01
WG548896: R1804620: L529154-01
WG548824: R1804970: L529154-02 03 04 05 06

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WG549034: R1805370: L529154-01
WG549075: R1805450: L529154-01
WG548827: R1807011: L529154-01
WG549702: R1809651: L529154-01

* * 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.