

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



## SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

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COGCC/Rifle Office

1. OGCC Operator Number: 10150  
2. Name of Operator: Black Hills  
3. Address: 1515 Wynkoop St. Suite 500  
City: Denver State: CO Zip: 80202  
4. Contact Name: Jessica Donahue  
Phone: (720) 210-1333  
Fax: (303) 566-3344

Complete the Attachment  
Checklist

OP OGCC

5. API Number 05- 077-08554 OGCC Facility ID Number 112389  
6. Well/Facility Name: HSC 22-1DK 7. Well/Facility Number  
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): NENE Sect. 22, T9S R97W, 6th PM  
9. County: Mesa (077) 10. Field Name: Shire Gulch  
11. Federal, Indian or State Lease Number: COC014473

Survey Plat  
Directional Survey  
Surface Eqmpt Diagram  
Technical Info Page  
Other

General Notice 39.264651 - 108.197747

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL	FEL/FWL
Change of Surface Footage from Exterior Section Lines:		
Change of Surface Footage to Exterior Section Lines:		
Change of Bottomhole Footage from Exterior Section Lines:		
Change of Bottomhole Footage to Exterior Section Lines:		

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude Distance to nearest property line Distance to nearest bldg, public rd, utility or RR

Longitude Distance to nearest lease line Is location in a High Density Area (rule 603b)? Yes/No

Ground Elevation Distance to nearest well same formation Surface owner consultation date:

## GPS DATA:

Date of Measurement PDOP Reading Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond  
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):  
Effective Date:  
Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME  
From:  
To:  
Effective Date:

☐ ABANDONED LOCATION:  
Was location ever built? ☐ Yes ☐ No  
Is site ready for inspection? ☐ Yes ☐ No  
Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS  
Date well shut in or temporarily abandoned:  
Has Production Equipment been removed from site? ☐ Yes ☐ No  
MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK \*submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.  
Final reclamation will commence on approximately Final reclamation is completed and site is ready for inspection.

## Technical Engineering/Environmental Notice

☐ Notice of Intent  
Approximate Start Date:

☐ Report of Work Done  
Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Background Levels	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Jessica Donahue Date: 8/12/11 Email: jessica.donahue@blackhillscorp.com  
Print Name: Jessica Donahue Title: Regulatory Technician

COGCC Approved: Date: 8/30/16

CONDITIONS OF APPROVAL, IF ANY:

Approved for Ar Levels: Pit closure and reclamation not approved.

FORM

4

Rev 12/05

## TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- |  |                           |
|--|---------------------------|
| 1. OGCC Operator Number: 10150   | API Number: 05-077-08554  |
| 2. Name of Operator: Black Hills   | OGCC Facility ID # 112389 |
| 3. Well/Facility Name: HSC 22-1DK  | Well/Facility Number:     |
| 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENE Sect. 22, T9S R97W, 6th PM |                           |

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COGCC/Rifle Office

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5.

**DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

This sundry is being submitted as a request to meet the background concentration levels for arsenic at the HSC 22-1DK well pad relative to production pit closure at the subject facility in accordance with footnote 1 to the COGCC table 910-1.

The request is based on the analytical results below for two pigging pits on location (see attached analytical):

One (1) grab sample was collected from location within the pit footprint at depths of approximately 3' to 3.6' below pad grade to ascertain the arsenic concentrations of the facility. The results are as follows:

Pit #2 Confirmation - 3.1 mg/kg

Average concentration - 3.1 mg/kg

Three (3) grab samples were collected from nearby non-impacted, native soil from surface to 6" below to establish the background arsenic concentrations. The results are as follows:

BKGD 1 - 1.7 mg/kg

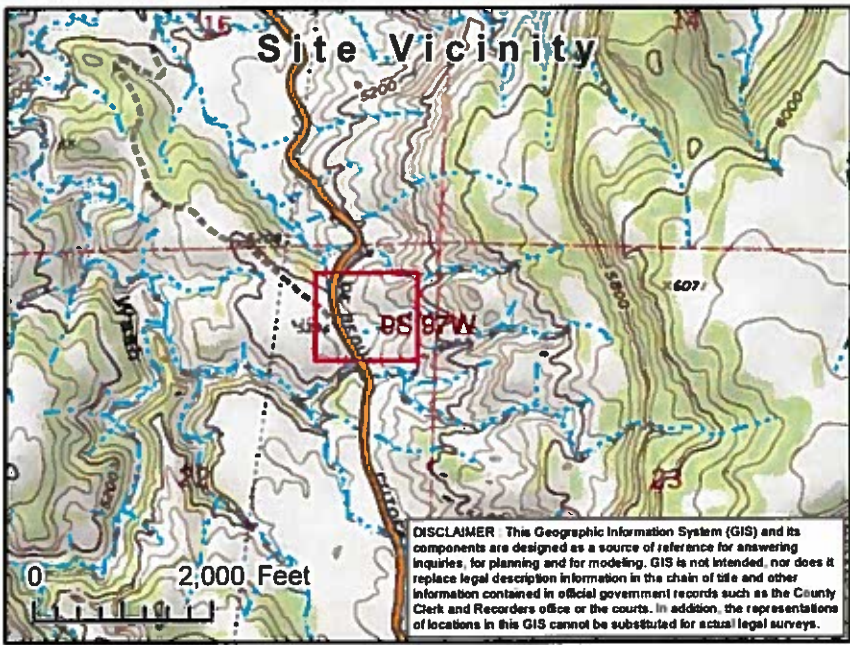
BKGD 2 - 2.3 mg/kg

BKGD 3 - 1.3 mg/kg

Average concentration - 1.76 mg/kg

Black Hills is requesting this approval in order to proceed with closure and reclamation of the subject pigging pit on the HSC 22-1DK well pad.





**Location Map**  
Location: HSC 22-1DK (Fed Alta 22-1)  
*Black Hill's Exploration and Production*

**Legend**

<b>GPS Features</b>	Roads
Background Sample Location	<b>Hydrographic Features</b>
Pit	Perennial Stream
<b>PLSS</b>	Intermittent Stream
Township	Ditch/Canal
Section	

DISCLAIMER: This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Records office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.

0 62.5 125 250 Feet

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COGCC/Rifle Office  
FOR COMPLIANCE  
SOLUTIONS, INC.  
Department of Geology



15-Apr-2011

Kris Rowe  
HRL Compliance Solutions  
744 Horizon Ct. Suite 140  
Grand Junction, CO 81506

Re: **Fed Alta 22-1 Pit Closure 4/5/11**

Work Order: **1104136**

Dear Kris,

ALS Environmental received 5 samples on 06-Apr-2011 09:30 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 34.

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



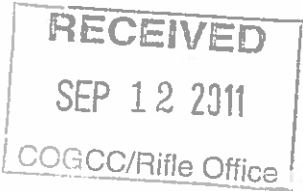
ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

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

Environmental The ALS logo icon, a stylized blue triangle with a yellow flame-like shape inside.

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER



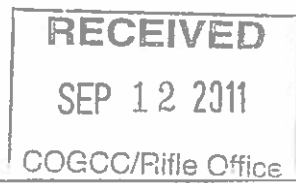
ALS Group USA, Corp

Date: 15-Apr-11

Client: HRL Compliance Solutions  
Project: Fed Alta 22-1 Pit Closure 4/5/11  
Work Order: 1104136

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>
1104136-01	Pit #1 Confirmation	Soil		4/5/2011 11:00	4/6/2011 09:30	<input type="checkbox"/>
1104136-02	Pit #2 Confirmation	Soil		4/5/2011 11:30	4/6/2011 09:30	<input type="checkbox"/>
1104136-03	BKGD 1	Soil		4/5/2011 12:00	4/6/2011 09:30	<input type="checkbox"/>
1104136-04	BKGD 2	Soil		4/5/2011 12:15	4/6/2011 09:30	<input type="checkbox"/>
1104136-05	BKGD 3	Soil		4/5/2011 12:20	4/6/2011 09:30	<input type="checkbox"/>



**ALS Group USA, Corp**

*Date: 15-Apr-11*

**Client:** HRL Compliance Solutions  
**Project:** Fed Alta 22-1 Pit Closure 4/5/11  
**Work Order:** 1104136

**Case Narrative**

Batch 32690 MS/MSD data for Metals is not related to this project's samples.

Batch 32696 LCS recoveries for Anthracene and Chrysene were below control limits causing the RPD to be above control limits. The LCSD recoveries met quality control criteria. Sample 1104136-01B was run at a dilution due to high DRO in the sample.

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ALS Group USA, Corp

Date: 15-Apr-11

Client: HRL Compliance Solutions  
Project: Fed Alta 22-1 Pit Closure 4/5/11  
WorkOrder: 1104136

QUALIFIERS,  
ACRONYMS, UNITS

Qualifier	Description
*	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
Acronym	Description
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
TDL	Target Detection Limit
Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry as noted	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
s.u.	Standard Units

ALS Group USA, Corp

Date: 15-Apr-11



Client: HRL Compliance Solutions

Project: Fed Alta 22-1 Pit Closure 4/5/11

Sample ID: BKGD 1

Collection Date: 4/5/2011 12:00 PM

Work Order: 1104136

Lab ID: 1104136-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>						
Arsenic	1.7		SW6020A 0.98	mg/Kg-dry	Prep Date: 4/7/2011 2	Analyst: CES 4/8/2011 04:55 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 4/14/11		SUBCONTRACT as noted		1	Analyst: A&LGL 4/14/2011
<b>MOISTURE</b>						
Moisture	15		A2540 G 0.010	% of sample	1	Analyst: KV 4/6/2011 01:44 PM
<b>PH</b>						
pH	9.52		SW9045D	s.u.	1	Analyst: KV 4/6/2011 07:45 AM

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



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Date: 15-Apr-11

Client: HRL Compliance Solutions

Project: Fed Alta 22-1 Pit Closure 4/5/11

Sample ID: BKGD 2

Collection Date: 4/5/2011 12:15 PM

Work Order: 1104136

Lab ID: 1104136-04

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 4/7/2011	Analyst: CES
Arsenic	2.3		0.92	mg/Kg-dry	2	4/8/2011 05:01 PM
MOISTURE			A2540 G			Analyst: KV
Moisture	12		0.010	% of sample	1	4/6/2011 01:44 PM

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

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ALS Group USA, Corp

Date: 15-Apr-11

Client:	HRL Compliance Solutions	
Project:	Fed Alta 22-1 Pit Closure 4/5/11	Work Order: 1104136
Sample ID:	BKGD 3	Lab ID: 1104136-05
Collection Date:	4/5/2011 12:20 PM	Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 4/7/2011	Analyst: CES
Arsenic	1.3		0.92	mg/Kg-dry	2	4/8/2011 05:07 PM
MOISTURE			A2540 G			Analyst: KV
Moisture	16		0.010	% of sample	1	4/6/2011 01:44 PM

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

Report Number: F11098-0214  
Account Number: 91000

**A & L GREAT LAKES LABORATORIES, INC.**  
3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274  
www.algreatlakes.com • lab@algreatlakes.com



**QUALITY ANALYSES FOR INFORMED DECISIONS**

TO: ALS LABORATORY GROUP  
3352 128TH AVE  
HOLLAND, MI 49424-9263

RE: 1104136 PROJECT

DATE RECEIVED: 04/08/2011  
DATE REPORTED: 04/14/2011  
PAGE: 1  
P.O. NUMBER: 20-122009952

**REPORT OF ANALYSIS**

ATTN: ANN PRESTON

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
78265	01C	Sat'd Paste Extraction with DIW Conductivity (ECe) Calcium (Sat'd Paste) Magnesium (Sat'd Paste) Sodium (Sat'd Paste) Sodium Adsorption Ratio	1 1.10 7 4 766 57.0	mmho/cm ppm ppm ppm -	USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60
78266	02C	Sat'd Paste Extraction with DIW Conductivity (ECe) Calcium (Sat'd Paste) Magnesium (Sat'd Paste) Sodium (Sat'd Paste) Sodium Adsorption Ratio	1 0.40 30 6 226 9.6	mmho/cm ppm ppm ppm -	USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60
78270	03B	Sat'd Paste Extraction with DIW Conductivity (ECe) Calcium (Sat'd Paste) Magnesium (Sat'd Paste) Sodium (Sat'd Paste) Sodium Adsorption Ratio	1 0.33 7 2 281 24.0	mmho/cm ppm ppm ppm -	USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60 USDA Handbook 60

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# ALS Group USA, Corp

**Client:** HRL Compliance Solutions  
**Work Order:** 1104136  
**Project:** Fed Alta 22-1 Pit Closure 4/5/11



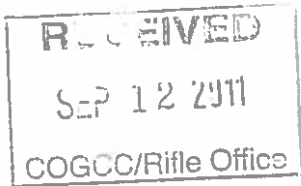
Date: 15-Apr-11

## QC BATCH REPORT

Batch ID: 32697		Instrument ID GC8			Method: SW8015M					
MBLK	Sample ID: DBLKS1-32697-32697				Units: mg/Kg		Analysis Date: 4/8/2011 03:13 PM			
Client ID:	Run ID: GC8_110408A				SeqNo: 1594890		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	2.148	0	2	0	107	39-115	0			
LCS	Sample ID: DLCSS1-32697-32697				Units: mg/Kg		Analysis Date: 4/8/2011 01:58 PM			
Client ID:	Run ID: GC8_110408A				SeqNo: 1594888		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	154.4	5.0	200	0	77.2	60-130	0			
Surr: 4-Terphenyl-d14	1.634	0	2	0	81.7	39-115	0			
LCSD	Sample ID: DLCSDS1-32697-32697				Units: mg/Kg		Analysis Date: 4/8/2011 01:58 PM			
Client ID:	Run ID: GC8_110408A				SeqNo: 1594902		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	164.5	5.0	200	0	82.3	60-130	154.4	6.34	30	
Surr: 4-Terphenyl-d14	1.755	0	2	0	87.7	39-115	1.634	7.1	30	
MS	Sample ID: 1104122-05A MS				Units: mg/Kg		Analysis Date: 4/8/2011 02:24 PM			
Client ID:	Run ID: GC8_110408A				SeqNo: 1594889		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	316.5	8.2	326.3	0	97	60-130	0			
Surr: 4-Terphenyl-d14	3.145	0	3.263	0	96.4	39-115	0			
MSD	Sample ID: 1104122-05A MSD				Units: mg/Kg		Analysis Date: 4/8/2011 02:24 PM			
Client ID:	Run ID: GC8_110408A				SeqNo: 1594903		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	252.7	8.0	318.4	0	79.4	60-130	316.5	22.4	30	
Surr: 4-Terphenyl-d14	2.92	0	3.184	0	91.7	39-115	3.145	7.42	30	
The following samples were analyzed in this batch:				1104136-01B 1104136-02B						

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: R88864 Instrument ID GC9 Method: SW8015

MBLK	Sample ID: MBLK-R88864-R88864					Units: µg/L		Analysis Date: 4/9/2011 12:07 PM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596519		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	97.49	0	100	0	97.5	70-130	0			

LCS	Sample ID: LCS-R88864-R88864					Units: µg/L		Analysis Date: 4/9/2011 10:50 AM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596517		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	26750	200	25000	0	107	70-130	0			
Surr: Toluene-d8	105.8	0	100	0	106	70-130	0			

LCSD	Sample ID: LCSD-R88864-R88864					Units: µg/L		Analysis Date: 4/9/2011 11:16 AM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596518		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	26530	200	25000	0	106	70-130	26750	0.826	30	
Surr: Toluene-d8	99.27	0	100	0	99.3	70-130	105.8	6.37	30	

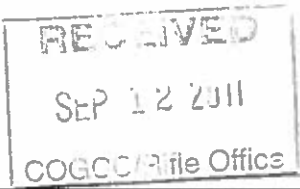
MS	Sample ID: 1104118-05C MS					Units: µg/L		Analysis Date: 4/9/2011 09:05 PM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596534		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	24020	200	25000	0	96.1	70-130	0			
Surr: Toluene-d8	91.52	0	100	0	91.5	70-130	0			

MS	Sample ID: 1104153-05B MS					Units: µg/Kg		Analysis Date: 4/9/2011 09:31 PM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596563		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	2512000	5,000	2500000	0	100	70-130	0			
Surr: Toluene-d8	9137	0	10000	0	91.4	50-150	0			

MSD	Sample ID: 1104118-05C MSD					Units: µg/L		Analysis Date: 4/9/2011 09:57 PM		
Client ID:	Run ID: GC9_110409A				SeqNo: 1596536		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	22890	200	25000	0	91.5	70-130	24020	4.81	30	
Surr: Toluene-d8	95.54	0	100	0	95.5	70-130	91.52	4.3	30	

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: R88864      Instrument ID GC9      Method: SW8015

MSD	Sample ID: 1104153-05B MSD				Units: µg/Kg		Analysis Date: 4/9/2011 10:22 PM			
Client ID:	Run ID: GC9_110409A				SeqNo: 1596564		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	2380000	5,000	2500000	0	95.2	70-130	2512000	5.43	30	
Surr: Toluene-d8	8826	0	10000	0	88.3	50-150	9137	3.46	30	

The following samples were analyzed in this batch:

1104136-01A	1104136-02A
-------------	-------------

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



Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11

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QC BATCH REPORT

Batch ID: 32719      Instrument ID HG1      Method: SW7471

MBLK      Sample ID: MBLK-32719-32719      Units: mg/Kg      Analysis Date: 4/8/2011 02:40 PM  
Client ID:      Run ID: HG1\_110408A      SeqNo: 1594718      Prep Date: 4/8/2011      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-32719-32719      Units: mg/Kg      Analysis Date: 4/8/2011 02:42 PM  
Client ID:      Run ID: HG1\_110408A      SeqNo: 1594719      Prep Date: 4/8/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1787	0.020	0.1665		0	107	80-120	0		

LCSD      Sample ID: LCSD-32719-32719      Units: mg/Kg      Analysis Date: 4/8/2011 02:44 PM  
Client ID:      Run ID: HG1\_110408A      SeqNo: 1594720      Prep Date: 4/8/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1867	0.020	0.1665		0	112	80-120	0.1787	4.38	20

MS      Sample ID: 1104139-04AMS      Units: mg/Kg      Analysis Date: 4/8/2011 04:32 PM  
Client ID:      Run ID: HG1\_110408B      SeqNo: 1594817      Prep Date: 4/8/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1985	0.019	0.1583	0.01659	115	75-125		0		

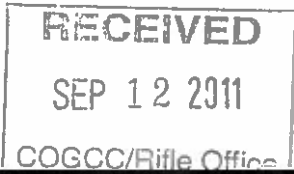
MSD      Sample ID: 1104139-04AMSD      Units: mg/Kg      Analysis Date: 4/8/2011 04:34 PM  
Client ID:      Run ID: HG1\_110408B      SeqNo: 1594818      Prep Date: 4/8/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2057	0.019	0.1609	0.01659	118	75-125	0.1985	3.57	35	

The following samples were analyzed in this batch:      1104136-01B      1104136-02B

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: 32690      Instrument ID ICPMS2      Method: SW6020A

MBLK	Sample ID: MBLK-32690-32690				Units: mg/Kg		Analysis Date: 4/7/2011 06:34 PM			
Client ID:	Run ID: ICPMS2_110407A				SeqNo: 1594137		Prep Date: 4/6/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	0.00565	0.25								J
Copper	0.04572	0.25								J
Lead	0.001092	0.25								J
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.09835	0.50								J

LCS	Sample ID: LCS-32690-32690				Units: mg/Kg		Analysis Date: 4/7/2011 06:38 PM			
Client ID:	Run ID: ICPMS2_110407A				SeqNo: 1594138		Prep Date: 4/6/2011		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.603	0.50	5	0	92.1	80-120	0			
Barium	4.719	0.50	5	0	94.4	80-120	0			
Cadmium	4.68	0.20	5	0	93.6	80-120	0			
Chromium	4.843	0.50	5	0	96.9	80-120	0			
Copper	4.737	0.50	5	0	94.7	80-120	0			
Lead	4.727	0.50	5	0	94.5	80-120	0			
Nickel	4.678	0.50	5	0	93.6	80-120	0			
Selenium	4.555	0.50	5	0	91.1	80-120	0			
Silver	4.864	0.50	5	0	97.3	80-120	0			
Zinc	4.697	1.0	5	0	93.9	80-120	0			

LCSD	Sample ID: LCSD-32690-32690				Units: mg/Kg		Analysis Date: 4/7/2011 06:43 PM			
Client ID:	Run ID: ICPMS2_110407A				SeqNo: 1594139		Prep Date: 4/6/2011		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.679	0.50	5	0	93.6	80-120	4.603	1.64	20	
Barium	4.736	0.50	5	0	94.7	80-120	4.719	0.36	20	
Cadmium	4.715	0.20	5	0	94.3	80-120	4.68	0.745	20	
Chromium	4.888	0.50	5	0	97.8	80-120	4.843	0.925	20	
Copper	4.743	0.50	5	0	94.9	80-120	4.737	0.127	20	
Lead	4.735	0.50	5	0	94.7	80-120	4.727	0.169	20	
Nickel	4.672	0.50	5	0	93.4	80-120	4.678	0.128	20	
Selenium	4.57	0.50	5	0	91.4	80-120	4.555	0.329	20	
Silver	4.899	0.50	5	0	98	80-120	4.864	0.717	20	
Zinc	4.694	1.0	5	0	93.9	80-120	4.697	0.0639	20	

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11

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QC BATCH REPORT

Batch ID: 32690      Instrument ID ICPMS2      Method: SW6020A

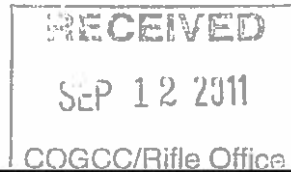
MS	Sample ID: 1104122-05AMS			Units: mg/Kg			Analysis Date: 4/7/2011 07:13 PM			
Client ID:	Run ID: ICPMS2_110407A			SeqNo: 1594145			Prep Date: 4/6/2011		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.97	1.8	8.929	4.885	102	80-120	0			
Barium	91.82	1.8	8.929	90.08	19.5	80-120	0			SO
Cadmium	8.218	0.71	8.929	0.03399	91.7	80-120	0			
Chromium	15.71	1.8	8.929	8.537	80.3	80-120	0			
Copper	16.7	1.8	8.929	15.25	16.2	80-120	0			S
Lead	15.19	1.8	8.929	6.339	99.2	80-120	0			
Nickel	26.23	1.8	8.929	8.968	193	80-120	0			S
Selenium	8.279	1.8	8.929	0.2604	89.8	80-120	0			
Silver	7.761	1.8	8.929	-0.143	88.5	80-120	0			
Zinc	24.09	3.6	8.929	14.57	107	80-120	0			

MSD	Sample ID: 1104122-05AMSD			Units: mg/Kg			Analysis Date: 4/7/2011 07:18 PM			
Client ID:	Run ID: ICPMS2_110407A			SeqNo: 1594146			Prep Date: 4/6/2011		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.98	1.7	8.569	4.885	106	80-120	13.97	0.0706	25	
Barium	112.9	1.7	8.569	90.08	266	80-120	91.82	20.6	25	SO
Cadmium	7.962	0.69	8.569	0.03399	92.5	80-120	8.218	3.16	25	
Chromium	14.74	1.7	8.569	8.537	72.4	80-120	15.71	6.36	25	S
Copper	20.05	1.7	8.569	15.25	56	80-120	16.7	18.2	25	S
Lead	14.23	1.7	8.569	6.339	92.1	80-120	15.19	6.54	25	
Nickel	16.56	1.7	8.569	8.968	88.5	80-120	26.23	45.2	25	R
Selenium	7.637	1.7	8.569	0.2604	86.1	80-120	8.279	8.07	25	
Silver	7.578	1.7	8.569	-0.143	90.1	80-120	7.761	2.38	25	
Zinc	24.58	3.4	8.569	14.57	117	80-120	24.09	2.01	25	

The following samples were analyzed in this batch: 1104136-01B 1104136-02B

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: 32707      Instrument ID ICPMS1      Method: SW6020A

MBLK      Sample ID: MBLK-32707-32707      Units: mg/Kg      Analysis Date: 4/8/2011 02:56 PM  
Client ID:      Run ID: ICPMS1\_110408A      SeqNo: 1595610      Prep Date: 4/7/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

LCS      Sample ID: LCS-32707-32707      Units: mg/Kg      Analysis Date: 4/8/2011 03:02 PM  
Client ID:      Run ID: ICPMS1\_110408A      SeqNo: 1595611      Prep Date: 4/7/2011      DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.044	0.50	5	0	80.9	80-120	0			

LCSD      Sample ID: LCSD-32707-32707      Units: mg/Kg      Analysis Date: 4/8/2011 03:08 PM  
Client ID:      Run ID: ICPMS1\_110408A      SeqNo: 1595612      Prep Date: 4/7/2011      DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.293	0.50	5	0	85.9	80-120	4.044	5.97	20	

MS      Sample ID: 1104153-05AMS      Units: mg/Kg      Analysis Date: 4/8/2011 03:49 PM  
Client ID:      Run ID: ICPMS1\_110408A      SeqNo: 1595619      Prep Date: 4/7/2011      DF: 4

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.26	1.7	8.621	5.735	87.3	80-120	0			

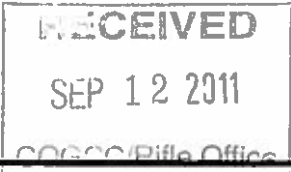
MSD      Sample ID: 1104153-05AMSD      Units: mg/Kg      Analysis Date: 4/8/2011 04:20 PM  
Client ID:      Run ID: ICPMS1\_110408A      SeqNo: 1595622      Prep Date: 4/7/2011      DF: 4

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.9	1.7	8.547	5.735	83.8	80-120	13.26	2.75	25	

The following samples were analyzed in this batch:      1104136-03A      1104136-04A      1104136-05A

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: 32696      Instrument ID SVMS4      Method: SW8270

MBLK	Sample ID: SBLKS1-32696-32696				Units: µg/Kg		Analysis Date: 4/8/2011 02:27 PM			
Client ID:		Run ID: SVMS4_110408A			SeqNo: 1594628		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2,4,6-Tribromophenol	1139	0	1667	0	68.4	34-140	0			
Surr: 2-Fluorobiphenyl	951	0	1667	0	57.1	12-100	0			
Surr: 2-Fluorophenol	1181	0	1667	0	70.8	33-117	0			
Surr: 4-Terphenyl-d14	1434	0	1667	0	86	25-137	0			
Surr: Nitrobenzene-d5	1185	0	1667	0	71.1	37-107	0			
Surr: Phenol-d6	1241	0	1667	0	74.5	40-106	0			

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11

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QC BATCH REPORT

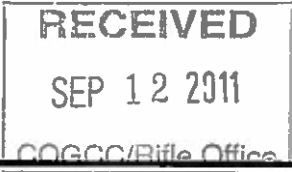
Batch ID: 32696      Instrument ID SVMS4      Method: SW8270

LCS	Sample ID: SLCSS1-32696-32696			Units: µg/Kg		Analysis Date: 4/8/2011 11:48 AM				
Client ID:		Run ID: SVMS4_110408A		SeqNo: 1594623		Prep Date: 4/7/2011		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	601	30	1333	0	45.1	45-110	0			
Anthracene	687	30	1333	0	51.5	55-105	0			S
Benzo(a)anthracene	758.7	30	1333	0	56.9	50-110	0			
Benzo(a)pyrene	796.7	30	1333	0	59.8	50-110	0			
Benzo(b)fluoranthene	758.7	30	1333	0	56.9	45-115	0			
Benzo(g,h,i)perylene	792	30	1333	0	58.4	40-125	0			
Benzo(k)fluoranthene	1011	30	1333	0	75.8	45-115	0			
Chrysene	675.7	30	1333	0	50.7	55-110	0			S
Dibenzo(a,h)anthracene	830.7	30	1333	0	62.3	40-125	0			
Fluoranthene	767	30	1333	0	57.5	55-115	0			
Fluorene	704.7	30	1333	0	52.9	50-110	0			
Indeno(1,2,3-cd)pyrene	820	30	1333	0	61.5	40-120	0			
Naphthalene	599.3	30	1333	0	45	40-105	0			
Pyrene	734	30	1333	0	55.1	45-125	0			
Surr: 2,4,6-Tribromophenol	850	0	1667	0	51	34-140	0			
Surr: 2-Fluorobiphenyl	734	0	1667	0	44	12-100	0			
Surr: 2-Fluorophenol	836.3	0	1667	0	50.2	33-117	0			
Surr: 4-Terphenyl-d14	1033	0	1667	0	62	25-137	0			
Surr: Nitrobenzene-d5	901	0	1667	0	54.1	37-107	0			
Surr: Phenol-d6	859	0	1667	0	51.5	40-106	0			

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



Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



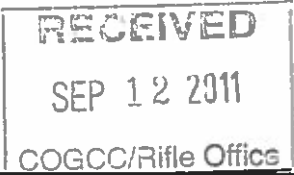
QC BATCH REPORT

Batch ID: 32696      Instrument ID SVMS4      Method: SW8270

LCSD		Sample ID: SLCSDS1-32696-32696			Units: µg/Kg		Analysis Date: 4/8/2011 12:19 PM			
Client ID:		Run ID: SVMS4_110408A			SeqNo: 1594624		Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	961.7	30	1333	0	72.1	45-110	601	46.2	25	R
Anthracene	1032	30	1333	0	77.4	55-105	687	40.1	25	R
Benzo(a)anthracene	1132	30	1333	0	84.9	50-110	758.7	39.5	25	R
Benzo(a)pyrene	1204	30	1333	0	90.3	50-110	796.7	40.7	25	R
Benzo(b)fluoranthene	1284	30	1333	0	96.3	45-115	758.7	51.5	25	R
Benzo(g,h,i)perylene	1105	30	1333	0	82.9	40-125	792	33	25	R
Benzo(k)fluoranthene	1373	30	1333	0	103	45-115	1011	30.4	25	R
Chrysene	1040	30	1333	0	78	55-110	675.7	42.5	25	R
Dibenzo(a,h)anthracene	1249	30	1333	0	93.7	40-125	830.7	40.3	25	R
Fluoranthene	1127	30	1333	0	84.5	55-115	767	38	25	R
Fluorene	1158	30	1333	0	86.8	50-110	704.7	48.6	25	R
Indeno(1,2,3-cd)pyrene	1212	30	1333	0	90.9	40-120	820	38.6	25	R
Naphthalene	947.3	30	1333	0	71.1	40-105	599.3	45	25	R
Pyrene	1077	30	1333	0	80.8	45-125	734	37.9	25	R
Surr: 2,4,6-Tribromophenol	1302	0	1667	0	78.1	34-140	850	42	40	R
Surr: 2-Fluorobiphenyl	1188	0	1667	0	71.3	12-100	734	47.3	40	R
Surr: 2-Fluorophenol	1325	0	1667	0	79.5	33-117	836.3	45.2	40	R
Surr: 4-Terphenyl-d14	1533	0	1667	0	92	25-137	1033	39	40	
Surr: Nitrobenzene-d5	1466	0	1667	0	88	37-107	901	47.7	40	R
Surr: Phenol-d6	1330	0	1667	0	79.8	40-106	859	43	40	R

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



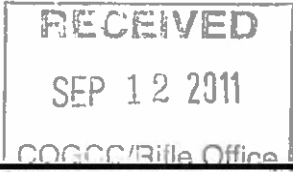
QC BATCH REPORT

Batch ID: 32696      Instrument ID SVMS4      Method: SW8270

MS	Sample ID: 1104122-05A MS			Units: µg/Kg		Analysis Date: 4/8/2011 12:51 PM				
Client ID:	Run ID: SVMS4_110408A			SeqNo: 1594625		Prep Date: 4/7/2011		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1756	58	2561	0	68.6	45-110	0			
Anthracene	1945	58	2561	0	76	55-105	0			
Benzo(a)anthracene	2120	58	2561	0	82.8	50-110	0			
Benzo(a)pyrene	2300	58	2561	0	89.8	50-110	0			
Benzo(b)fluoranthene	2489	58	2561	0	97.2	45-115	0			
Benzo(g,h,i)perylene	2248	58	2561	0	87.8	40-125	0			
Benzo(k)fluoranthene	2582	58	2561	0	101	45-115	0			
Chrysene	1946	58	2561	0	76	55-110	0			
Dibenzo(a,h)anthracene	2431	58	2561	0	94.9	40-125	0			
Fluoranthene	2123	58	2561	8.917	82.6	55-115	0			
Fluorene	2130	58	2561	0	83.2	50-110	0			
Indeno(1,2,3-cd)pyrene	2381	58	2561	0	93	40-120	0			
Naphthalene	1691	58	2561	0	66	40-105	0			
Pyrene	2037	58	2561	0	79.6	45-125	0			
Surr: 2,4,6-Tribromophenol	2447	0	3201	0	76.4	34-140	0			
Surr: 2-Fluorobiphenyl	2090	0	3201	0	65.3	12-100	0			
Surr: 2-Fluorophenol	2298	0	3201	0	71.8	33-117	0			
Surr: 4-Terphenyl-d14	2888	0	3201	0	90.2	25-137	0			
Surr: Nitrobenzene-d5	2576	0	3201	0	80.5	37-107	0			
Surr: Phenol-d6	2364	0	3201	0	73.8	40-106	0			

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

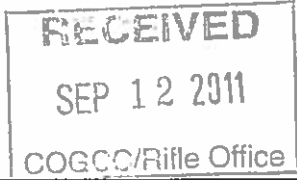
Batch ID: 32696      Instrument ID SVMS4      Method: SW8270

MSD	Sample ID: 1104122-05A MSD			Units: µg/Kg			Analysis Date: 4/8/2011 01:23 PM			
Client ID:	Run ID: SVMS4_110408A			SeqNo: 1594626			Prep Date: 4/7/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1684	56	2502	0	67.3	45-110	1756	4.18	30	
Anthracene	1917	56	2502	0	76.6	55-105	1945	1.46	30	
Benzo(a)anthracene	2071	56	2502	0	82.8	50-110	2120	2.31	30	
Benzo(a)pyrene	2248	56	2502	0	89.9	50-110	2300	2.31	30	
Benzo(b)fluoranthene	2342	56	2502	0	93.6	45-115	2489	6.09	30	
Benzo(g,h,i)perylene	2217	56	2502	0	88.6	40-125	2248	1.41	30	
Benzo(k)fluoranthene	2618	56	2502	0	105	45-115	2582	1.38	30	
Chrysene	1929	56	2502	0	77.1	55-110	1946	0.872	30	
Dibenzo(a,h)anthracene	2393	56	2502	0	95.7	40-125	2431	1.58	30	
Fluoranthene	2088	56	2502	8.917	83.1	55-115	2123	1.65	30	
Fluorene	2099	56	2502	0	83.9	50-110	2130	1.47	30	
Indeno(1,2,3-cd)pyrene	2337	56	2502	0	93.4	40-120	2381	1.86	30	
Naphthalene	1592	56	2502	0	63.7	40-105	1691	6	30	
Pyrene	1975	56	2502	0	79	45-125	2037	3.1	30	
Surr: 2,4,6-Tribromophenol	2447	0	3127	0	78.3	34-140	2447	0.0118	40	
Surr: 2-Fluorobiphenyl	1974	0	3127	0	63.1	12-100	2090	5.67	40	
Surr: 2-Fluorophenol	2260	0	3127	0	72.3	33-117	2298	1.65	40	
Surr: 4-Terphenyl-d14	2840	0	3127	0	90.8	25-137	2888	1.68	40	
Surr: Nitrobenzene-d5	2455	0	3127	0	78.5	37-107	2576	4.81	40	
Surr: Phenol-d6	2297	0	3127	0	73.4	40-106	2364	2.88	40	

The following samples were analyzed in this batch:      1104136-01B      1104136-02B

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: R88809      Instrument ID VMS6      Method: SW8260

MBLK	Sample ID: VBLKW1-110409-R88809				Units: µg/L		Analysis Date: 4/9/2011 09:47 AM			
Client ID:	Run ID: VMS6_110409A				SeqNo: 1594935		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: VLCSW1-110409-R88809				Units: µg/L		Analysis Date: 4/9/2011 08:30 AM			
Client ID:	Run ID: VMS6_110409A				SeqNo: 1594933		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.06	1.0	20	0	110	80-120	0			
Ethylbenzene	22.52	1.0	20	0	113	75-125	0			
m,p-Xylene	44.73	2.0	40	0	112	75-130	0			
o-Xylene	22.76	1.0	20	0	114	80-120	0			
Toluene	21.64	1.0	20	0	108	75-120	0			
Xylenes, Total	67.49	2.0	60	0	112	75-130	0			

LCSD	Sample ID: VLCSDW1-110409-R88809				Units: µg/L		Analysis Date: 4/9/2011 08:55 AM			
Client ID:	Run ID: VMS6_110409A				SeqNo: 1594934		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.59	1.0	20	0	113	80-120	22.06	2.37	30	
Ethylbenzene	22.96	1.0	20	0	115	75-125	22.52	1.93	30	
m,p-Xylene	45.59	2.0	40	0	114	75-130	44.73	1.9	30	
o-Xylene	23.16	1.0	20	0	116	80-120	22.76	1.74	30	
Toluene	22.16	1.0	20	0	111	75-120	21.64	2.37	30	
Xylenes, Total	68.75	2.0	60	0	115	75-130	67.49	1.85	30	

MS	Sample ID: 1104118-05C MS				Units: µg/L		Analysis Date: 4/9/2011 06:32 PM			
Client ID:	Run ID: VMS6_110409A				SeqNo: 1595011		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.23	1.0	20	0	111	80-120	0			
Ethylbenzene	22.05	1.0	20	0	110	75-125	0			
m,p-Xylene	43.67	2.0	40	0	109	75-130	0			
o-Xylene	22.36	1.0	20	0	112	80-120	0			
Toluene	21.23	1.0	20	0	106	75-120	0			
Xylenes, Total	66.03	2.0	60	0	110	75-130	0			

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11

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QC BATCH REPORT

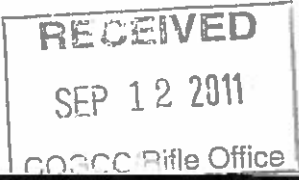
Batch ID: R88809      Instrument ID VMS6      Method: SW8260

MSD	Sample ID: 1104118-05C MSD				Units: µg/L		Analysis Date: 4/9/2011 06:59 PM			
Client ID:	Run ID: VMS6_110409A				SeqNo: 1595012		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.66	1.0	20	0	108	80-120	22.23	2.6	30	
Ethylbenzene	21.63	1.0	20	0	108	75-125	22.05	1.92	30	
m,p-Xylene	42.94	2.0	40	0	107	75-130	43.67	1.69	30	
o-Xylene	22.11	1.0	20	0	111	80-120	22.36	1.12	30	
Toluene	20.7	1.0	20	0	104	75-120	21.23	2.53	30	
Xylenes, Total	65.05	2.0	60	0	108	75-130	66.03	1.5	30	

The following samples were analyzed in this batch:      1104136-01A      1104136-02A

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: 32792      Instrument ID WETCHEM      Method: SW7196A

MBLK      Sample ID: MBLK-32792-32792      Units: mg/Kg      Analysis Date: 4/12/2011 03:30 PM  
Client ID:      Run ID: WETCHEM\_110412D      SeqNo: 1597576      Prep Date: 4/11/2011      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-32792-32792      Units: mg/Kg      Analysis Date: 4/12/2011 03:30 PM  
Client ID:      Run ID: WETCHEM\_110412D      SeqNo: 1597576      Prep Date: 4/11/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.753	0.49	1.961		0	89.4	75-110	0		

LCSD      Sample ID: LCSD-32792-32792      Units: mg/Kg      Analysis Date: 4/12/2011 03:30 PM  
Client ID:      Run ID: WETCHEM\_110412D      SeqNo: 1597577      Prep Date: 4/11/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.776	0.48	1.931		0	92	75-110	1.753	1.31	20

MS      Sample ID: 1104139-05A MS      Units: mg/Kg      Analysis Date: 4/12/2011 03:30 PM  
Client ID:      Run ID: WETCHEM\_110412D      SeqNo: 1597570      Prep Date: 4/11/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.726	0.48	1.931		0	89.4	60-130	0		

MSD      Sample ID: 1104139-05A MSD      Units: mg/Kg      Analysis Date: 4/12/2011 03:30 PM  
Client ID:      Run ID: WETCHEM\_110412D      SeqNo: 1597571      Prep Date: 4/11/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.753	0.49	1.961		0	89.4	60-130	1.726	1.56	30

The following samples were analyzed in this batch:      1104136-01B      1104136-02B

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



Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11

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QC BATCH REPORT

Batch ID: R88725      Instrument ID WETCHEM      Method: SW9045D

DUP	Sample ID: 1104136-01B DUP				Units: s.u.		Analysis Date: 4/6/2011 07:45 AM			
Client ID: Pit #1 Confirmation			Run ID: WETCHEM_110406G		SeqNo: 1592773		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.98	0	0	0	0	0-0	9.98	0	20	

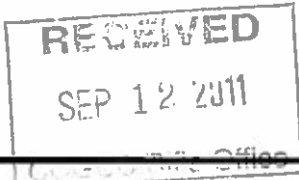
DUP	Sample ID: 1104139-05A DUP				Units: s.u.		Analysis Date: 4/6/2011 07:45 AM			
Client ID:			Run ID: WETCHEM_110406G		SeqNo: 1592781		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.06	0	0	0	0	0-0	9.06	0	20	

The following samples were analyzed in this batch:

1104136-01B	1104136-02B	1104136-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: R88741      Instrument ID MOIST      Method: A2540 G

MBLK      Sample ID: WBLKS1-110406-R88741      Units: % of sample      Analysis Date: 4/6/2011 01:29 PM  
Client ID:      Run ID: MOIST\_110406A      SeqNo: 1593368      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: 1104122-05A DUP1      Units: % of sample      Analysis Date: 4/6/2011 01:29 PM  
Client ID:      Run ID: MOIST\_110406A      SeqNo: 1593349      Prep Date:      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.1	0.010	0	0	0	0-0	3	31	20	R

DUP      Sample ID: 1104122-05A DUP2      Units: % of sample      Analysis Date: 4/6/2011 01:29 PM  
Client ID:      Run ID: MOIST\_110406A      SeqNo: 1593350      Prep Date:      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.1	0.010	0	0	0	0-0	3	31	20	R

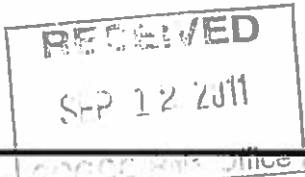
DUP      Sample ID: 1104136-01B DUP      Units: % of sample      Analysis Date: 4/6/2011 01:29 PM  
Client ID: Pit #1 Confirmation      Run ID: MOIST\_110406A      SeqNo: 1593365      Prep Date:      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	16.8	0.010	0	0	0	0-0	16.7	0.597	20	

The following samples were analyzed in this batch:      1104136-01B      1104136-02B

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

Client: HRL Compliance Solutions  
Work Order: 1104136  
Project: Fed Alta 22-1 Pit Closure 4/5/11



QC BATCH REPORT

Batch ID: R88742      Instrument ID MOIST      Method: A2540 G

MBLK	Sample ID: WBLKS1-110406-R88742				Units: % of sample			Analysis Date: 4/6/2011 01:44 PM		
Client ID:	Run ID: MOIST_110406B				SeqNo: 1593405			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: 1104136-04A DUP				Units: % of sample			Analysis Date: 4/6/2011 01:44 PM		
Client ID: BKGD 2	Run ID: MOIST_110406B				SeqNo: 1593382			Prep Date: DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.1	0.010	0	0	0	0-0	12	8.76	20	

DUP	Sample ID: 1104139-01A DUP				Units: % of sample			Analysis Date: 4/6/2011 01:44 PM		
Client ID:	Run ID: MOIST_110406B				SeqNo: 1593388			Prep Date: DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	6.3	0.010	0	0	0	0-0	5.8	8.26	20	

The following samples were analyzed in this batch:

1104136-03A	1104136-04A	1104136-05A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.





## Chain-of-Custody

WORKORDER #	1104136
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\*Time Zone (Circle): EST CST MST PST      Matrix: O = oil S = soil NS = non-sol solid W = water L = liquid E = extract F = filter

**SIGNATURE** \_\_\_\_\_

Comments:	<p>Report Barium as total Barium and do not run Boron</p> <p>COC has correct sample ID nomenclature</p>		QC PACKAGE (check below)	
	<p><i>AP</i></p>		LEVEL II (Standard OC)	
			LEVEL III (Std OC + forms)	
	<p>5.62</p>		LEVEL IV (Std OC + forms + raw data)	
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		Kris Rowe	4/6/2011	17:00
RECEIVED BY		Diana F. Shaw	4/6/11	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				



**A & L Great Lakes Agricultural Lab**  
3505 Conestoga Dr

FL Wayne, IN 46808

**Date:** 07-Apr-11  
**COC ID:** 2892  
**Due Date** 12-Apr-11

Accd #: 91000

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4/12/11 Extra sample sent for -03  
See Buan.

**Please run SAR-EC**

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
					Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Sample Receipt Checklist

RECEIVED  
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COGCC/Rifle Office

Client Name: HRL  
Work Order: 1104136

Date/Time Received: 06-Apr-11 09:30  
Received by: DS

Checklist completed by <u>Diane Sham</u>	06-Apr-11	Reviewed by: <u>Ann Preston</u>	07-Apr-11
eSignature	Date	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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input 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>5.6 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:

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Client Contacted:	Date Contacted:	Person Contacted:
Contacted By:	Regarding:	

Comments:	
CorrectiveAction:	



