

State of Colorado
Oil and Gas Conservation Commission

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



FOR OGCC USE ONLY

REM 9636
Document 2526153
Date 04/29/2016

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: _____	Contact Name and Telephone: _____
Name of Operator: _____	_____
Address: _____	No: _____
City: _____ State: _____ Zip: _____	Fax: _____
API Number: _____	County: _____
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location: (QtrQtr, Sec, Twp, Rng, Meridian): _____ Latitude: _____ Longitude: _____	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): _____

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): _____

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: _____

Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	_____	_____
Vegetation	_____	_____
Groundwater	_____	_____
Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Describe how source is to be removed:

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:



Tracking Number:	_____
Name of Operator:	_____
OGCC Operator No:	_____
Received Date:	_____
Well Name & No:	_____
Facility Name & No:	_____

Page 2

REMEDIAL WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Based on observations from the soil borings and geological conditions present at the location, groundwater has not been impacted

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

When remediation activities are complete, the excavation will be backfilled and recontoured to the original pad surface.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☒ N If yes, describe:

Analytical results and a map depicting the soil boring locations are attached.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

The treated soils from the HSCU3 will be beneficially reused on the 9-41 location.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>4/4/2016</u>	Date Site Investigation Completed: <u>4/16/2016</u>	Date Remediation Plan Submitted: <u>4/29/2016</u>
Remediation Start Date: <u>TBD</u>	Anticipated Completion Date: <u>TBD</u>	Actual Completion Date: <u>TBD</u>

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

Print Name: Jessica Donahue Signed: _____

Title: Regulatory Technician Date: _____

OGCC Approved: _____ Title: _____ Date: _____

- COAs: 1) Submit a Sundry Notice (e-form 04) from the receiving pad (Homer Deep 9-41, Location ID #432260) with an E&P waste Mngmt plan, describing the landfarming operation;
2) Attach a signed letter from the landowner approving that impacted material be transported to Homer Deep 9-41 for treatment and beneficial use.

Attachment A

Remediation Location: HSCU3
Location ID #: 116408

Name of Operator: Black Hills Plateau Production, LLC
Latitude: 39.239161 Longitude -108.230346
Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSW, Sec 28, T9S, R97W

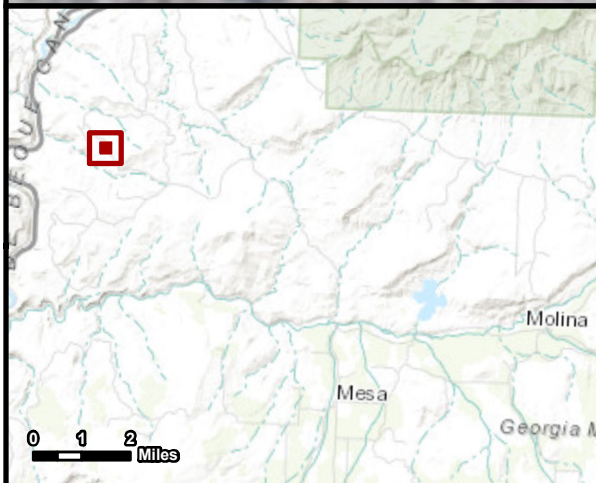
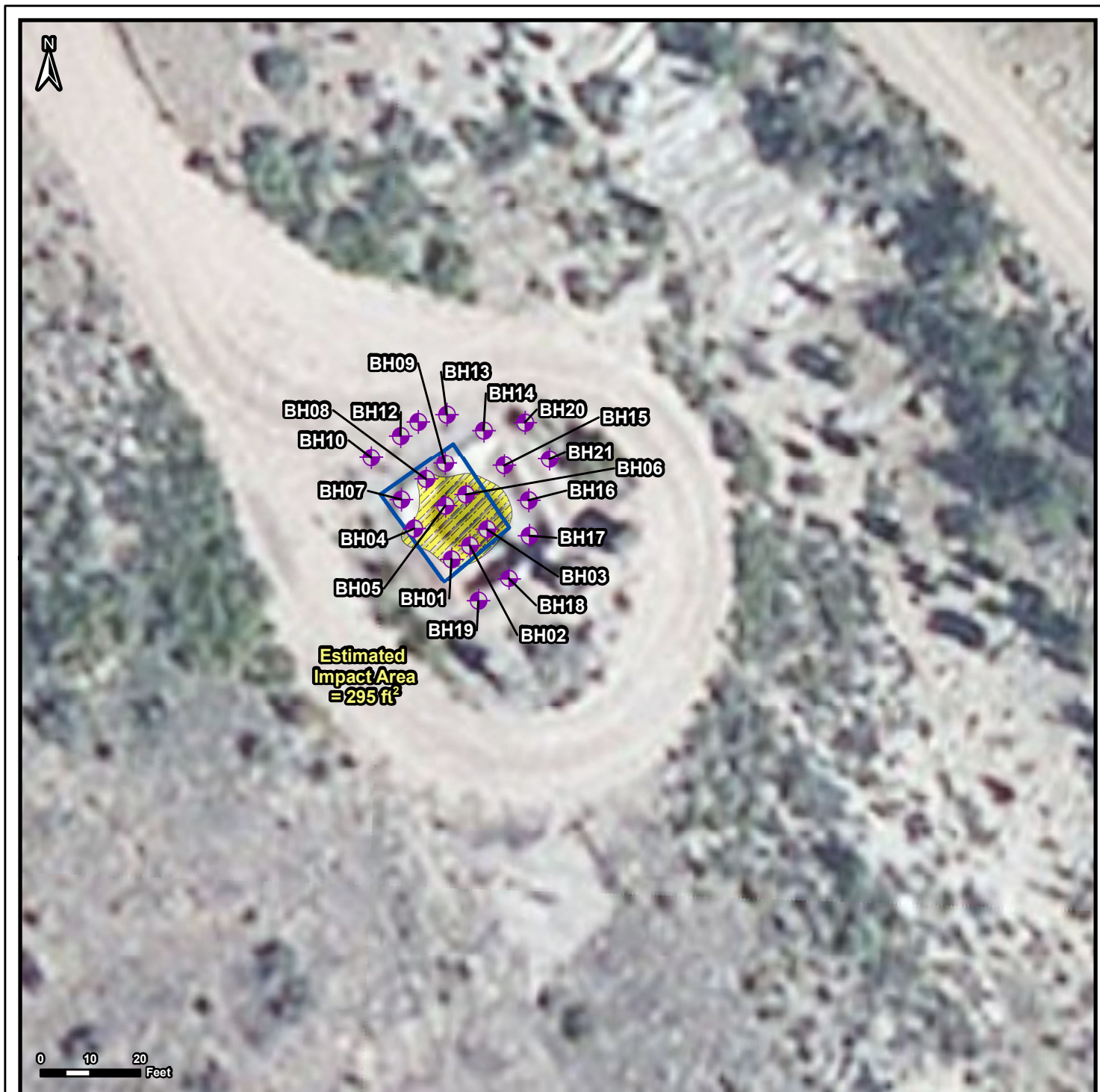
COGCC Operator # 10150

County: Mesa

Describe how remediation of existing impacts is to be accomplished

As noted in the previous section, the area of impacted soil in the vicinity of the former pit will be remediated to levels which comply with COGCC Table 910-1 standards. Black Hills would like to propose the following in regards to the remediation.

- The area of impact within the vicinity of the old pit, which exceeds Tale 910- criteria, will be excavated.
- When the excavation activities are complete, confirmation samples will be collected from the four walls and bottom of the excavation to ensure compliance with Table 910-1.
- Black Hills would like to transport the excavated soil to the Homer Deep 9-41 pad for on-site treatment.
- This is being proposed as there is currently active remediation occurring on the location and there is existing treatment infrastructure which would allow for on-site treatment of the soil from the HSCU3 location. Approval to transport the soil from the HSCU3 to the Homer Deep 9-41 location would be completed via a Sundry Form 4.
- The soil from the HSCU3 would be treated in a separately constructed LTU and there will be absolutely no intermixing of this soil with the material currently being treated on-site.
- Upon successful treatment of the HSCU3 soil, Black Hills would like to propose beneficial re-use onsite (9-41 location).
- The excavation on the HSCU3 will be backfilled with clean native material to the original pad surface.



NOTES / COMMENTS:

DISCLAIMER: This representation and the Geographic Information System (GIS) used to create it are designed as a source of reference and not intended to replace official records and/or legal surveys. HCSL assumes no responsibility for any risks, dangers, or liabilities that may result from its use and makes no guarantee as to the quality or accuracy of the underlying data.



SAMPLE LOCATION MAP

Horseshoe Canyon Unit 3

39.239364 -108.230378
Section 28, Township 9 South, Range 97 West

Mapped Features	Transportation	Hydrography
Soil Boring Location	CO Highways	Ditch
Estimated Impact Area	County Roads	Intermittent Stream
Estimated Pit Boundary	Local Streets	Perennial Stream
	Access Roads	Waterbody
PLSS		Watershed
Township		
Section		



HRL COMPLIANCE SOLUTIONS, INC.
Environmental Consultants

Author: E. Fought
Revision: 0
Date: 4/28/2016



26-Apr-2016

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **Black Hills Energy, HSCU 3**

Work Order: **16041052**

Dear Mark,

ALS Environmental received 5 samples on 20-Apr-2016 10:00 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.

Sample results are compliant with NELAP standard requirements and QC results achieved 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,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 998501

Report of Laboratory Analysis

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

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Work Order: 16041052

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>
16041052-01	BH03 4-6'	Soil		4/13/2016 09:20	4/20/2016 10:00	<input type="checkbox"/>
16041052-02	BH04 7-9'	Soil		4/13/2016 11:25	4/20/2016 10:00	<input type="checkbox"/>
16041052-03	BH08 4-6'	Soil		4/13/2016 13:35	4/20/2016 10:00	<input type="checkbox"/>
16041052-04	BH15 7-9'	Soil		4/14/2016 09:20	4/20/2016 10:00	<input type="checkbox"/>
16041052-05	BH18 7-11'	Soil		4/14/2016 11:00	4/20/2016 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc**Project:** Black Hills Energy, HSCU 3**Work Order:** 16041052**Case Narrative**

Batch 85070, Method VOC_8260_S, Sample 16041052-01A: The sample ran at a dilution due to high concentrations of non-target analytes.

Batch 85070, Method VOC_8260_S, Sample 16041052-02A: VOC surrogate recovery high due to matrix interference.

<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 is present at an estimated concentration between the MDL and Report 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
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH03 4-6'
Collection Date: 4/13/2016 09:20 AM

Work Order: 16041052
Lab ID: 16041052-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 4/22/16	Analyst: IT
DRO (C10-C28)	1,200		9.3	mg/Kg-dry	1	4/22/2016 09:46 PM
Surr: 4-Terphenyl-d14	57.3		39-133	%REC	1	4/22/2016 09:46 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 4/22/16	Analyst: IT
GRO (C6-C10)	7,900		17	mg/Kg-dry	5	4/22/2016 03:25 PM
Surr: Toluene-d8	91.6		50-150	%REC	5	4/22/2016 03:25 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 4/22/16	Analyst: AK
Benzene	ND		3.0	mg/Kg-dry	100	4/22/2016 05:53 PM
Ethylbenzene	6.8		3.0	mg/Kg-dry	100	4/22/2016 05:53 PM
m,p-Xylene	53		6.0	mg/Kg-dry	100	4/22/2016 05:53 PM
o-Xylene	19		3.0	mg/Kg-dry	100	4/22/2016 05:53 PM
Toluene	ND		3.0	mg/Kg-dry	100	4/22/2016 05:53 PM
Xylenes, Total	72		9.0	mg/Kg-dry	100	4/22/2016 05:53 PM
Surr: 1,2-Dichloroethane-d4	99.4		70-130	%REC	100	4/22/2016 05:53 PM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	100	4/22/2016 05:53 PM
Surr: Dibromofluoromethane	87.2		70-130	%REC	100	4/22/2016 05:53 PM
Surr: Toluene-d8	96.4		70-130	%REC	100	4/22/2016 05:53 PM
MOISTURE						
			SW3550C			Analyst: ED
Moisture	14		0.050	% of sample	1	4/22/2016 03:11 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH04 7-9'
Collection Date: 4/13/2016 11:25 AM

Work Order: 16041052
Lab ID: 16041052-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 4/22/16	Analyst: IT
DRO (C10-C28)	1,300		9.0	mg/Kg-dry	1	4/22/2016 10:16 PM
Surr: 4-Terphenyl-d14	72.4		39-133	%REC	1	4/22/2016 10:16 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 4/22/16	Analyst: IT
GRO (C6-C10)	550		3.0	mg/Kg-dry	1	4/22/2016 01:43 PM
Surr: Toluene-d8	94.4		50-150	%REC	1	4/22/2016 01:43 PM
MERCURY BY CVAA						
			SW7471B		Prep: SW7471 / 4/25/16	Analyst: LR
Mercury	0.028		0.016	mg/Kg-dry	1	4/25/2016 04:35 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 4/22/16	Analyst: JEC
Arsenic	1.5		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Barium	75		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Cadmium	ND		0.33	mg/L-dry	1	4/22/2016 07:08 PM
Chromium	6.0		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Copper	20		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Lead	12		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Nickel	14		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Selenium	ND		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Silver	ND		0.42	mg/L-dry	1	4/22/2016 07:08 PM
Zinc	61		0.83	mg/L-dry	1	4/22/2016 07:08 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 4/25/16	Analyst: JEC
Calcium	22		5.0	mg/L	10	4/25/2016 02:42 PM
Magnesium	5.0		2.0	mg/L	10	4/25/2016 02:42 PM
Sodium	310		2.0	mg/L	10	4/25/2016 02:42 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 4/25/16	Analyst: JEC
Sodium Adsorption Ratio	16		0.010	none	1	4/25/2016
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3546 / 4/21/16	Analyst: RS
Acenaphthene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Anthracene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Benzo(a)anthracene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Benzo(a)pyrene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Benzo(b)fluoranthene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Benzo(k)fluoranthene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Chrysene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Dibenzo(a,h)anthracene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Fluoranthene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH04 7-9'
Collection Date: 4/13/2016 11:25 AM

Work Order: 16041052
Lab ID: 16041052-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	0.30		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Indeno(1,2,3-cd)pyrene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Naphthalene	1.1		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Pyrene	ND		0.014	mg/Kg-dry	1	4/22/2016 07:28 PM
Surr: 2-Fluorobiphenyl	68.9		12-100	%REC	1	4/22/2016 07:28 PM
Surr: 4-Terphenyl-d14	99.8		25-137	%REC	1	4/22/2016 07:28 PM
Surr: Nitrobenzene-d5	62.2		37-107	%REC	1	4/22/2016 07:28 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 4/22/16		Analyst: AK
Benzene	ND		0.030	mg/Kg-dry	1	4/22/2016 06:17 PM
Ethylbenzene	0.10		0.030	mg/Kg-dry	1	4/22/2016 06:17 PM
m,p-Xylene	0.94		0.060	mg/Kg-dry	1	4/22/2016 06:17 PM
o-Xylene	0.31		0.030	mg/Kg-dry	1	4/22/2016 06:17 PM
Toluene	0.038		0.030	mg/Kg-dry	1	4/22/2016 06:17 PM
Xylenes, Total	1.2		0.090	mg/Kg-dry	1	4/22/2016 06:17 PM
Surr: 1,2-Dichloroethane-d4	97.0		70-130	%REC	1	4/22/2016 06:17 PM
Surr: 4-Bromofluorobenzene	132	S	70-130	%REC	1	4/22/2016 06:17 PM
Surr: Dibromofluoromethane	89.0		70-130	%REC	1	4/22/2016 06:17 PM
Surr: Toluene-d8	105		70-130	%REC	1	4/22/2016 06:17 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 4/25/16		Analyst: JB
Electrical Conductivity @ Saturation	1.7		0.050	mmhos/cm @2	10	4/26/2016 12:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JB
Chromium, Trivalent	6.0		0.55	mg/Kg-dry	1	4/26/2016 07:50 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 4/22/16		Analyst: MB
Chromium, Hexavalent	ND		1.1	mg/Kg-dry	1	4/25/2016 04:00 PM
MOISTURE			SW3550C			Analyst: ED
Moisture	9.3		0.050	% of sample	1	4/22/2016 03:11 PM
PH			SW9045D	Prep: EXTRACT / 4/20/16		Analyst: STP
pH	9.4			s.u.	1	4/20/2016 07:20 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH08 4-6'
Collection Date: 4/13/2016 01:35 PM

Work Order: 16041052
Lab ID: 16041052-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 4/22/16	Analyst: IT
DRO (C10-C28)	90		8.7	mg/Kg-dry	1	4/22/2016 10:46 PM
Surr: 4-Terphenyl-d14	48.1		39-133	%REC	1	4/22/2016 10:46 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 4/22/16	Analyst: IT
GRO (C6-C10)	400		3.0	mg/Kg-dry	1	4/22/2016 02:08 PM
Surr: Toluene-d8	101		50-150	%REC	1	4/22/2016 02:08 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 4/22/16	Analyst: AK
Benzene	ND		0.030	mg/Kg-dry	1	4/22/2016 06:42 PM
Ethylbenzene	0.10		0.030	mg/Kg-dry	1	4/22/2016 06:42 PM
m,p-Xylene	0.90		0.060	mg/Kg-dry	1	4/22/2016 06:42 PM
o-Xylene	0.13		0.030	mg/Kg-dry	1	4/22/2016 06:42 PM
Toluene	ND		0.030	mg/Kg-dry	1	4/22/2016 06:42 PM
Xylenes, Total	1.0		0.090	mg/Kg-dry	1	4/22/2016 06:42 PM
Surr: 1,2-Dichloroethane-d4	97.2		70-130	%REC	1	4/22/2016 06:42 PM
Surr: 4-Bromofluorobenzene	121		70-130	%REC	1	4/22/2016 06:42 PM
Surr: Dibromofluoromethane	86.2		70-130	%REC	1	4/22/2016 06:42 PM
Surr: Toluene-d8	109		70-130	%REC	1	4/22/2016 06:42 PM
MOISTURE						
			SW3550C			Analyst: ED
Moisture	9.2		0.050	% of sample	1	4/22/2016 03:11 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH15 7-9'
Collection Date: 4/14/2016 09:20 AM

Work Order: 16041052
Lab ID: 16041052-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 4/22/16	Analyst: IT
DRO (C10-C28)	31		8.7	mg/Kg-dry	1	4/22/2016 05:17 PM
Surr: 4-Terphenyl-d14	58.8		39-133	%REC	1	4/22/2016 05:17 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 4/22/16	Analyst: IT
GRO (C6-C10)	95		2.9	mg/Kg-dry	1	4/22/2016 02:32 PM
Surr: Toluene-d8	101		50-150	%REC	1	4/22/2016 02:32 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 4/22/16	Analyst: AK
Benzene	ND		0.030	mg/Kg-dry	1	4/22/2016 07:07 PM
Ethylbenzene	0.063		0.030	mg/Kg-dry	1	4/22/2016 07:07 PM
m,p-Xylene	0.38		0.060	mg/Kg-dry	1	4/22/2016 07:07 PM
o-Xylene	0.079		0.030	mg/Kg-dry	1	4/22/2016 07:07 PM
Toluene	ND		0.030	mg/Kg-dry	1	4/22/2016 07:07 PM
Xylenes, Total	0.46		0.090	mg/Kg-dry	1	4/22/2016 07:07 PM
Surr: 1,2-Dichloroethane-d4	93.2		70-130	%REC	1	4/22/2016 07:07 PM
Surr: 4-Bromofluorobenzene	107		70-130	%REC	1	4/22/2016 07:07 PM
Surr: Dibromofluoromethane	83.2		70-130	%REC	1	4/22/2016 07:07 PM
Surr: Toluene-d8	102		70-130	%REC	1	4/22/2016 07:07 PM
MOISTURE						
			SW3550C			Analyst: ED
Moisture	7.9		0.050	% of sample	1	4/22/2016 03:11 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Project: Black Hills Energy, HSCU 3
Sample ID: BH18 7-11'
Collection Date: 4/14/2016 11:00 AM

Work Order: 16041052
Lab ID: 16041052-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 4/22/16	Analyst: IT
DRO (C10-C28)	42		8.6	mg/Kg-dry	1	4/22/2016 11:16 PM
Surr: 4-Terphenyl-d14	62.9		39-133	%REC	1	4/22/2016 11:16 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 4/22/16	Analyst: IT
GRO (C6-C10)	250		2.9	mg/Kg-dry	1	4/22/2016 02:57 PM
Surr: Toluene-d8	101		50-150	%REC	1	4/22/2016 02:57 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 4/22/16	Analyst: AK
Benzene	ND		0.030	mg/Kg-dry	1	4/22/2016 07:31 PM
Ethylbenzene	0.078		0.030	mg/Kg-dry	1	4/22/2016 07:31 PM
m,p-Xylene	0.68		0.060	mg/Kg-dry	1	4/22/2016 07:31 PM
o-Xylene	0.19		0.030	mg/Kg-dry	1	4/22/2016 07:31 PM
Toluene	ND		0.030	mg/Kg-dry	1	4/22/2016 07:31 PM
Xylenes, Total	0.87		0.090	mg/Kg-dry	1	4/22/2016 07:31 PM
Surr: 1,2-Dichloroethane-d4	93.5		70-130	%REC	1	4/22/2016 07:31 PM
Surr: 4-Bromofluorobenzene	114		70-130	%REC	1	4/22/2016 07:31 PM
Surr: Dibromofluoromethane	84.3		70-130	%REC	1	4/22/2016 07:31 PM
Surr: Toluene-d8	104		70-130	%REC	1	4/22/2016 07:31 PM
MOISTURE						
			SW3550C			Analyst: ED
Moisture	8.0		0.050	% of sample	1	4/22/2016 03:11 PM

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

ALS Group USA, Corp

Date: 26-Apr-16

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85042** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-85042-85042				Units: mg/Kg		Analysis Date: 4/22/2016 03:17 PM		
Client ID:		Run ID: GC8_160422B				SeqNo: 3792202		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	8.3								
Surr: 4-Terphenyl-d14	2.614	0	3.333	0	78.4	39-133		0		

LCS		Sample ID: DLCSS1-85042-85042				Units: mg/Kg		Analysis Date: 4/22/2016 03:47 PM		
Client ID:		Run ID: GC8_160422B				SeqNo: 3792203		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	300.8	8.3	333.3	0	90.2	61-109		0		
Surr: 4-Terphenyl-d14	2.35	0	3.333	0	70.5	39-133		0		

MS		Sample ID: 16041052-04A MS				Units: mg/Kg		Analysis Date: 4/22/2016 04:17 PM		
Client ID: BH15 7-9'		Run ID: GC8_160422B				SeqNo: 3792204		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	264	8.1	323.7	28.19	72.9	48-110		0		
Surr: 4-Terphenyl-d14	1.989	0	3.237	0	61.4	39-133		0		

MSD		Sample ID: 16041052-04A MSD				Units: mg/Kg		Analysis Date: 4/22/2016 04:47 PM		
Client ID: BH15 7-9'		Run ID: GC8_160422B				SeqNo: 3792205		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	276.8	8.2	326.4	28.19	76.2	48-110	264	4.72	30	
Surr: 4-Terphenyl-d14	2.175	0	3.264	0	66.6	39-133	1.989	8.94	30	

The following samples were analyzed in this batch:

16041052-01A	16041052-02A	16041052-03A
16041052-04A	16041052-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85075** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-85075-85075				Units: µg/Kg-dry		Analysis Date: 4/22/2016 12:53 PM		
Client ID:		Run ID: GC9_160422A				SeqNo: 3789760		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	4788	0	5000	0	95.8	50-150	0			

LCS		Sample ID: LCS-85075-85075				Units: µg/Kg-dry		Analysis Date: 4/22/2016 12:29 PM		
Client ID:		Run ID: GC9_160422A				SeqNo: 3789759		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	504400	2,500	500000	0	101	70-130	0			
Surr: Toluene-d8	5164	0	5000	0	103	50-150	0			

MS		Sample ID: 16041052-05A MS				Units: µg/Kg-dry		Analysis Date: 4/22/2016 03:49 PM		
Client ID: BH18 7-11'		Run ID: GC9_160422A				SeqNo: 3789767		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	738200	2,900	587000	254900	82.4	70-130	0			
Surr: Toluene-d8	6001	0	5870	0	102	50-150	0			

MSD		Sample ID: 16041052-05A MSD				Units: µg/Kg-dry		Analysis Date: 4/22/2016 04:14 PM		
Client ID: BH18 7-11'		Run ID: GC9_160422A				SeqNo: 3789768		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	779000	2,900	587000	254900	89.3	70-130	738200	5.37	30	
Surr: Toluene-d8	6114	0	5870	0	104	50-150	6001	1.87	30	

The following samples were analyzed in this batch:

16041052-01A	16041052-02A	16041052-03A
16041052-04A	16041052-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85100** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-85100-85100				Units: mg/Kg		Analysis Date: 4/25/2016 04:26 PM		
Client ID:		Run ID: HG1_160425A				SeqNo: 3793242		Prep Date: 4/25/2016		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-85100-85100				Units: mg/Kg		Analysis Date: 4/25/2016 04:28 PM		
Client ID:		Run ID: HG1_160425A				SeqNo: 3793243		Prep Date: 4/25/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1725 0.020 0.1665 0 104 80-120 0

MS		Sample ID: 1604955-07BMS					Units: mg/Kg		Analysis Date: 4/25/2016 05:23 PM		
Client ID:			Run ID: HG1_160425A			SeqNo: 3793345		Prep Date: 4/25/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.1195 0.013 0.1066 0.008324 104 75-125 0

MSD		Sample ID: 1604955-07BMSD				Units: mg/Kg		Analysis Date: 4/25/2016 05:25 PM		
Client ID:		Run ID: HG1_160425A			SeqNo: 3793346		Prep Date: 4/25/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1171 0.013 0.1073 0.008324 101 75-125 0.1195 2.07 35

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **84992** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 16041052-02ADUP				Units: mg/L		Analysis Date: 4/25/2016 02:48 PM		
Client ID: BH04 7-9'		Run ID: ICP2_160425A				SeqNo: 3792998		Prep Date: 4/25/2016		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	20.08	5.0	0	0	0	0-0	22.26	10.3		
Magnesium	5.1	2.0	0	0	0	0-0	4.962	2.74		
Sodium	389.5	2.0	0	0	0	0-0	314.9	21.2		

DUP		Sample ID: 16041052-02ADUP				Units: none		Analysis Date: 4/25/2016		
Client ID: BH04 7-9'		Run ID: SAR_160425A				SeqNo: 3793050		Prep Date: 4/25/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	20.09	0.010	0	0	0		15.72	24.5	50	

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85062**

Instrument ID **ICP2**

Method: **SW846 6010C**

MBLK		Sample ID: MBLK-85062-85062				Units: mg/Kg		Analysis Date: 4/22/2016 05:51 PM		
Client ID:		Run ID: ICP2_160422A				SeqNo: 3791281		Prep Date: 4/22/2016		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	0.08204	0.50								J
Chromium	ND	0.25								
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS		Sample ID: LCS-85062-85062				Units: mg/Kg		Analysis Date: 4/22/2016 05:57 PM		
Client ID:		Run ID: ICP2_160422A				SeqNo: 3791282		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.301	0.25	5	0	106	80-120	0			
Barium	5.054	0.25	5	0	101	80-120	0			
Cadmium	5.198	0.50	5	0	104	80-120	0			
Chromium	5.424	0.25	5	0	108	80-120	0			
Copper	5.282	0.50	5	0	106	80-120	0			
Lead	5.156	0.25	5	0	103	80-120	0			
Nickel	5.068	0.25	5	0	101	80-120	0			
Selenium	5.15	0.50	5	0	103	80-120	0			
Silver	4.993	0.25	5	0	99.9	80-120	0			
Zinc	5.366	0.50	5	0	107	80-120	0			

MS		Sample ID: 16041111-19AMS				Units: mg/Kg		Analysis Date: 4/25/2016 12:54 PM		
Client ID:		Run ID: ICP2_160425A				SeqNo: 3792518		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.9	0.38	7.53	6.47	112	75-125	0			
Barium	47.62	0.38	7.53	42.26	71.1	75-125	0			SO
Cadmium	7.249	0.75	7.53	0.008434	96.2	75-125	0			
Chromium	15.93	0.38	7.53	10.43	73.1	75-125	0			S
Copper	39.38	0.75	7.53	48.37	-120	75-125	0			SO
Lead	39.89	0.38	7.53	36.24	48.4	75-125	0			SO
Nickel	15.99	0.38	7.53	8.847	94.9	75-125	0			
Selenium	8.825	0.75	7.53	0.4965	111	75-125	0			
Silver	7.65	0.38	7.53	0.02498	101	75-125	0			
Zinc	62.05	0.75	7.53	49.05	173	75-125	0			SO

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85062** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 16041111-19AMSD				Units: mg/Kg		Analysis Date: 4/25/2016 12:59 PM		
Client ID:		Run ID: ICP2_160425A				SeqNo: 3792519		Prep Date: 4/22/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.23	0.37	7.463	6.47	131	75-125	14.9	8.57	20	S
Barium	41.7	0.37	7.463	42.26	-7.56	75-125	47.62	13.3	20	SO
Cadmium	7.205	0.75	7.463	0.008434	96.4	75-125	7.249	0.612	20	
Chromium	15.22	0.37	7.463	10.43	64.2	75-125	15.93	4.57	20	S
Copper	30.3	0.75	7.463	48.37	-242	75-125	39.38	26.1	20	SRO
Lead	36.19	0.37	7.463	36.24	-0.745	75-125	39.89	9.72	20	SO
Nickel	14.54	0.37	7.463	8.847	76.3	75-125	15.99	9.49	20	
Selenium	8.839	0.75	7.463	0.4965	112	75-125	8.825	0.152	20	
Silver	7.729	0.37	7.463	0.02498	103	75-125	7.65	1.03	20	
Zinc	63.32	0.75	7.463	49.05	191	75-125	62.05	2.03	20	SO

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **84988** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-84988-84988				Units: µg/Kg		Analysis Date: 4/21/2016 04:31 PM		
Client ID:		Run ID: SVMS5_160421A				SeqNo: 3789106		Prep Date: 4/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	13								
Anthracene	ND	13								
Benzo(a)anthracene	ND	13								
Benzo(a)pyrene	ND	13								
Benzo(b)fluoranthene	ND	13								
Benzo(k)fluoranthene	ND	13								
Chrysene	ND	13								
Dibenzo(a,h)anthracene	ND	13								
Fluoranthene	ND	13								
Fluorene	ND	13								
Indeno(1,2,3-cd)pyrene	ND	13								
Naphthalene	ND	13								
Pyrene	ND	13								
<i>Surr: 2-Fluorobiphenyl</i>	2697	0	3333	0	80.9	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	3601	0	3333	0	108	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	2895	0	3333	0	86.9	37-107	0			

LCS		Sample ID: SLCSS1-84988-84988				Units: µg/Kg		Analysis Date: 4/21/2016 04:51 PM		
Client ID:		Run ID: SVMS5_160421A				SeqNo: 3789107		Prep Date: 4/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1045	13	1333	0	78.4	45-110	0			
Anthracene	1344	13	1333	0	101	55-105	0			
Benzo(a)anthracene	1351	13	1333	0	101	50-110	0			
Benzo(a)pyrene	1348	13	1333	0	101	50-110	0			
Benzo(b)fluoranthene	1445	13	1333	0	108	45-115	0			
Benzo(k)fluoranthene	1456	13	1333	0	109	45-115	0			
Chrysene	1361	13	1333	0	102	55-110	0			
Dibenzo(a,h)anthracene	1289	13	1333	0	96.6	40-125	0			
Fluoranthene	1501	13	1333	0	113	55-115	0			
Fluorene	1156	13	1333	0	86.7	50-110	0			
Indeno(1,2,3-cd)pyrene	1551	13	1333	0	116	40-120	0			
Naphthalene	1069	13	1333	0	80.1	40-105	0			
Pyrene	1435	13	1333	0	108	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	2500	0	3333	0	75	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	3273	0	3333	0	98.2	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	2623	0	3333	0	78.7	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **84988** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1604907-27B MS			Units: µg/Kg		Analysis Date: 4/21/2016 05:49 PM	
Client ID:				Run ID: SVMS5_160421A			SeqNo: 3789108		Prep Date: 4/21/2016	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	936.6	13	1331	0	70.3	45-110	0			
Anthracene	1226	13	1331	16.27	90.9	55-105	0			
Benzo(a)anthracene	1248	13	1331	81.98	87.6	50-110	0			
Benzo(a)pyrene	1186	13	1331	103.4	81.3	50-110	0			
Benzo(b)fluoranthene	1353	13	1331	107.4	93.5	45-115	0			
Benzo(k)fluoranthene	1233	13	1331	36.43	89.9	45-115	0			
Chrysene	1230	13	1331	74.82	86.7	55-110	0			
Dibenzo(a,h)anthracene	1074	13	1331	0	80.7	40-125	0			
Fluoranthene	1476	13	1331	152.9	99.4	55-115	0			
Fluorene	1032	13	1331	0	77.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1313	13	1331	53.35	94.6	40-120	0			
Naphthalene	975.9	13	1331	0	73.3	40-105	0			
Pyrene	1325	13	1331	134.7	89.4	45-125	0			
Surr: 2-Fluorobiphenyl	2191	0	3329	0	65.8	12-100	0			
Surr: 4-Terphenyl-d14	2781	0	3329	0	83.5	25-137	0			
Surr: Nitrobenzene-d5	2433	0	3329	0	73.1	37-107	0			

MSD				Sample ID: 1604907-27B MSD			Units: µg/Kg		Analysis Date: 4/21/2016 06:13 PM	
Client ID:				Run ID: SVMS5_160421A			SeqNo: 3789109		Prep Date: 4/21/2016	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	902.1	13	1304	0	69.2	45-110	936.6	3.76	30	
Anthracene	1254	13	1304	16.27	94.9	55-105	1226	2.25	30	
Benzo(a)anthracene	1423	13	1304	81.98	103	50-110	1248	13.1	30	
Benzo(a)pyrene	1356	13	1304	103.4	96.1	50-110	1186	13.4	30	
Benzo(b)fluoranthene	1575	13	1304	107.4	113	45-115	1353	15.2	30	
Benzo(k)fluoranthene	1316	13	1304	36.43	98.2	45-115	1233	6.52	30	
Chrysene	1380	13	1304	74.82	100	55-110	1230	11.5	30	
Dibenzo(a,h)anthracene	1114	13	1304	0	85.4	40-125	1074	3.61	30	
Fluoranthene	1889	13	1304	152.9	133	55-115	1476	24.6	30	S
Fluorene	972.5	13	1304	0	74.6	50-110	1032	5.98	30	
Indeno(1,2,3-cd)pyrene	1446	13	1304	53.35	107	40-120	1313	9.69	30	
Naphthalene	977.7	13	1304	0	75	40-105	975.9	0.185	30	
Pyrene	1757	13	1304	134.7	124	45-125	1325	28	30	
Surr: 2-Fluorobiphenyl	2103	0	3259	0	64.5	12-100	2191	4.07	40	
Surr: 4-Terphenyl-d14	2775	0	3259	0	85.2	25-137	2781	0.187	40	
Surr: Nitrobenzene-d5	2281	0	3259	0	70	37-107	2433	6.47	40	

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85070** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-85070-85070				Units: µg/Kg-dry			Analysis Date: 4/22/2016 10:09 PM			
Client ID:				Run ID: VMS5_160422A				SeqNo: 3790232			Prep Date: 4/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	ND	30												
Ethylbenzene	ND	30												
m,p-Xylene	ND	60												
o-Xylene	ND	30												
Toluene	ND	30												
Xylenes, Total	ND	90												
Surr: 1,2-Dichloroethane-d4	1010	0	1000	0	101	70-130	0							
Surr: 4-Bromofluorobenzene	969	0	1000	0	96.9	70-130	0							
Surr: Dibromofluoromethane	993	0	1000	0	99.3	70-130	0							
Surr: Toluene-d8	972	0	1000	0	97.2	70-130	0							

LCS				Sample ID: LCS-85070-85070			Units: µg/Kg-dry		Analysis Date: 4/22/2016 08:25 PM		
Client ID:			Run ID: VMS5_160422A			SeqNo: 3790231		Prep Date: 4/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1062	30	1000	0	106	75-125	0				
Ethylbenzene	1106	30	1000	0	111	75-125	0				
m,p-Xylene	2262	60	2000	0	113	80-125	0				
o-Xylene	1088	30	1000	0	109	75-125	0				
Toluene	1064	30	1000	0	106	70-125	0				
Xylenes, Total	3350	90	3000	0	112	75-125	0				
Surr: 1,2-Dichloroethane-d4	975.5	0	1000	0	97.6	70-130	0				
Surr: 4-Bromofluorobenzene	1037	0	1000	0	104	70-130	0				
Surr: Dibromofluoromethane	982	0	1000	0	98.2	70-130	0				
Surr: Toluene-d8	992	0	1000	0	99.2	70-130	0				

MS				Sample ID: 16041182-05A MS				Units: µg/Kg-dry		Analysis Date: 4/23/2016 01:14 PM	
Client ID:			Run ID: VMS6_160422B			SeqNo: 3790413		Prep Date: 4/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1028	30	1000	0	103	75-125	0				
Ethylbenzene	997.5	30	1000	0	99.8	75-125	0				
m,p-Xylene	2036	60	2000	0	102	80-125	0				
o-Xylene	972	30	1000	0	97.2	75-125	0				
Toluene	967.5	30	1000	0	96.8	70-125	0				
Xylenes, Total	3008	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	875.5	0	1000	0	87.6	70-130	0				
Surr: 4-Bromofluorobenzene	974.5	0	1000	0	97.4	70-130	0				
Surr: Dibromofluoromethane	922.5	0	1000	0	92.2	70-130	0				
Surr: Toluene-d8	935	0	1000	0	93.5	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85070** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 16041182-05A MSD			Units: µg/Kg-dry		Analysis Date: 4/23/2016 01:39 PM		
Client ID:			Run ID: VMS6_160422B			SeqNo: 3790414		Prep Date: 4/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1060	30	1000	0	106	75-125	1028	3.02	30		
Ethylbenzene	1031	30	1000	0	103	75-125	997.5	3.3	30		
m,p-Xylene	2094	60	2000	0	105	80-125	2036	2.81	30		
o-Xylene	1006	30	1000	0	101	75-125	972	3.49	30		
Toluene	1004	30	1000	0	100	70-125	967.5	3.65	30		
Xylenes, Total	3100	90	3000	0	103	75-125	3008	3.03	30		
Surr: 1,2-Dichloroethane-d4	887.5	0	1000	0	88.8	70-130	875.5	1.36	30		
Surr: 4-Bromofluorobenzene	959.5	0	1000	0	96	70-130	974.5	1.55	30		
Surr: Dibromofluoromethane	951.5	0	1000	0	95.2	70-130	922.5	3.09	30		
Surr: Toluene-d8	937.5	0	1000	0	93.8	70-130	935	0.267	30		

The following samples were analyzed in this batch:

16041052-01A	16041052-02A	16041052-03A
16041052-04A	16041052-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **84959** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-84959-84959				Units: s.u.		Analysis Date: 4/20/2016 07:20 PM		
Client ID:		Run ID: WETCHEM_160420R				SeqNo: 3785348		Prep Date: 4/20/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	3.96	0	4	0	99	90-110	0			
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DUP		Sample ID: 1604973-01A DUP				Units: s.u.		Analysis Date: 4/20/2016 07:20 PM		
Client ID:		Run ID: WETCHEM_160420R				SeqNo: 3785354		Prep Date: 4/20/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.59	0	0	0	0	0-0	7.56	0.396	20	
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The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **84992** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 16041052-02A DUP				Units: mmhos/cm @25°		Analysis Date: 4/26/2016 12:00 PM		
Client ID: BH04 7-9'		Run ID: WETCHEM_160426E				SeqNo: 3794655		Prep Date: 4/25/2016		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.953	0.050	0	0	0		1.689	14.5	50	

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **85154** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-85154-85154				Units: mg/Kg		Analysis Date: 4/25/2016 04:00 PM		
Client ID:		Run ID: WETCHEM_160425L		SeqNo: 3793366		Prep Date: 4/22/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.98

LCS		Sample ID: LCS-85154-85154				Units: mg/Kg		Analysis Date: 4/25/2016 04:00 PM		
Client ID:		Run ID: WETCHEM_160425L		SeqNo: 3793365		Prep Date: 4/22/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.465 0.99 4.95 0 90.2 80-120 0

MS		Sample ID: 16041111-14A MS				Units: mg/Kg		Analysis Date: 4/25/2016 04:00 PM		
Client ID:		Run ID: WETCHEM_160425L		SeqNo: 3793353		Prep Date: 4/22/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.228 0.99 4.95 0 85.4 75-125 0

MS		Sample ID: 16041111-14A MSI				Units: mg/Kg		Analysis Date: 4/25/2016 04:00 PM		
Client ID:		Run ID: WETCHEM_160425L		SeqNo: 3793355		Prep Date: 4/22/2016		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1915 100 1979 0 96.8 75-125 0

MSD		Sample ID: 16041111-14A MSD				Units: mg/Kg		Analysis Date: 4/25/2016 04:00 PM		
Client ID:		Run ID: WETCHEM_160425L		SeqNo: 3793354		Prep Date: 4/22/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.228 0.99 4.95 0 85.4 75-125 4.228 0 20

The following samples were analyzed in this batch:

16041052-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 16041052
Project: Black Hills Energy, HSCU 3

QC BATCH REPORT

Batch ID: **R186008** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R186008				Units: % of sample		Analysis Date: 4/22/2016 03:11 PM		
Client ID:		Run ID: MOIST_160422E				SeqNo: 3791027		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

LCS		Sample ID: LCS-R186008				Units: % of sample		Analysis Date: 4/22/2016 03:11 PM		
Client ID:		Run ID: MOIST_160422E				SeqNo: 3791026		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.99 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 16041052-01A DUP				Units: % of sample		Analysis Date: 4/22/2016 03:11 PM		
Client ID: BH03 4-6'		Run ID: MOIST_160422E				SeqNo: 3791005		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.9 0.050 0 0 0 13.71 1.38 20

DUP		Sample ID: 16041208-01A DUP				Units: % of sample		Analysis Date: 4/22/2016 03:11 PM		
Client ID:		Run ID: MOIST_160422E				SeqNo: 3791020		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 21.68 0.050 0 0 0 21.02 3.09 20

The following samples were analyzed in this batch:

16041052-01A	16041052-02A	16041052-03A
16041052-04A	16041052-05A	

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



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 #	16041052
PAGE	1 of 1
DISPOSAL	By Lab or Return to Client

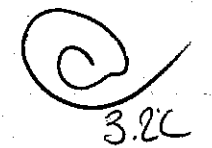
PROJECT NAME	Black Hills Energy, HSCU3	SAMPLER	Mark Mumby
PROJECT No.	HRH 16-113	SITE ID	HSCU3
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRH Compliance	BILL TO COMPANY	HRH
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Melissa Peruse, Kim Cass
ADDRESS	2385 F1/2 Road	ADDRESS	
CITY/STATE/ZIP	Grand Jct, CO 81505	CITY/STATE/ZIP	
PHONE	970-243-3271	PHONE	
FAX	970-243-3280	FAX	KCASS@hrhcomp.com
E-MAIL	mmumby@hrhcomp.com	E-MAIL	mperuse@hrhcomp.com


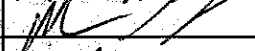
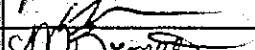

DATE	4/15/2016
TURNAROUND	Standard 5-day
GRO	
DRO	
BTEX	
PAH - Table 910-1	
Metals Table 910-1	
SAR	
EC	
PH	

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
1	BH03 4-6'	S	4/13/16	9:20	2	8	
2	BH04 7-9'	↓		11:25	3	8	
3	BH08 4-6'	↓		13:35	2	8	
4	BH15-7-9'	↓	4/14/16	9:20	1	8	
5	BH18 7-11'	↓		11:00	1	8	

*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:	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: 	Mark E. Mumby	4/15/2016	11:00
RECEIVED BY: 	M. H.	4-19-16	11:15
RELINQUISHED BY: 	M. Broadbent	4-19-16	1230
RECEIVED BY: 	M. Broadbent	4/20/16	1000
RELINQUISHED BY:			
RECEIVED BY:			

ORIGIN ID: RILA (616) 298-1033
 NICK MARTINEZ
 ALS ENVIRONMENTAL PARACHUTE
 PARACHUTE SERVICE CENTER
 127 EAST 1ST ST
 PARACHUTE, CO 81635
 UNITED STATES US

SHIP DATE: 19APR16
 ACTWGT: 37.00 LB
 CAD: 2264840/NET3730
 DMS: 13x10x15 IN
 BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE

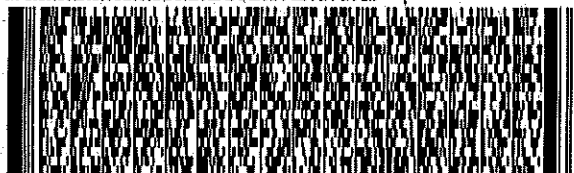
HOLLAND MI 49424

(616) 399-6070

REF: 041916-1

INV
 PO PARACHUTE

DEPT:



FedEx
 Express



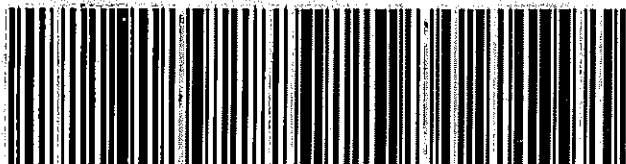
REL#
 3785346

TRK#
 0201 7761 4651 1960

WED - 20 APR 10:30A
 PRIORITY OVERNIGHT

XX HLMA

49424
 MI-US GRR



540J110427ZTF

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com/FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations of sales, income interest, profit, attorney's fees, costs, and other forms of recovery from FedEx for any loss, including intrinsic value of the package, loss limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; see current FedEx Service Guide.

ALS Environmental
 3362 128th Avenue
 Holland, Michigan 49424
 Tel: +1 616 399 6070
 Fax: +1 616 399 6185

CUSTODY SEAL

Seal Broken By

Date

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **20-Apr-16 10:00**

Work Order: **16041052**

Received by: **MEB**

Checklist completed by Meghan Broadbent
eSignature

20-Apr-16
Date

Reviewed by: Chad Whelton
eSignature

20-Apr-16
Date

Matrices: **soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 3.2/3.2 SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 4/20/2016 1:53:34 PM

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: