

State of Colorado
Oil and Gas Conservation Commission

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



Document Number:

400889917

Date Received:

08/25/2015

Spill report taken by:

LUJAN, CARLOS

Spill/Release Point ID:

437688

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATION

Name of Operator: <u>CAERUS PICEANCE LLC</u>	Operator No: <u>10456</u>	Phone Numbers
Address: <u>600 17TH STREET #1600N</u>		Phone: <u>(970) 285-9606</u>
City: <u>DENVER</u>	State: <u>CO</u>	Mobile: <u>(970) 285-9619</u>
Zip: <u>80202</u>		Email: <u>jjanicek@caerusoilandgas.com</u>
Contact Person: <u>Jake Janicek</u>		

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400628935

Initial Report Date: _____ Date of Discovery: 06/12/2014 Spill Type: Historical Release

Spill/Release Point Location:

Location of Spill/Release: QTRQTR SESW SEC 17 TWP 6S RNG 96W MERIDIAN 6

Latitude: 39.519810 Longitude: -108.133310

Municipality (if within municipal boundaries): _____ County: GARFIELD

Reference Location:

Facility Type: WELL PAD☐ Facility/Location ID No _____☐ No Existing Facility or Location ID No.☒ Well API No. (Only if the reference facility is well) 05-045-09528

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? No

Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.

Were Five (5) barrels or more spilled? Yes

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0Estimated Condensate Spill Volume(bbl): 0Estimated Flow Back Fluid Spill Volume(bbl): 0Estimated Produced Water Spill Volume(bbl): UnknownEstimated Other E&P Waste Spill Volume(bbl): 0Estimated Drilling Fluid Spill Volume(bbl): 0

Specify: Approximately 500 cubic feet of impacted material was excavated

Land Use:

Current Land Use: NON-CROP LANDOther(Specify): RangelandWeather Condition: Mostly sunny, dry, ~90 degrees F.Surface Owner: FEEOther(Specify): Chevron

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During the removal of the Partially Buried Vault (PBV), approximately 500 cubic yards of impacted material was excavated from beneath and around the PBV as a result from historic releases. All impacted material was placed within a bermed and lined containment for temporary storage. The excavation was opened to a point where the four walls and floor field tested as clean. Confirmation samples were collected from the four walls and floor and were found to be below Table 910-1 levels. The excavation was backfilled. There was no impact to surface or ground water and all of the contamination and impact was confined to the pad footprint.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

<u>Date</u>	<u>Agency/Party</u>	<u>Contact</u>	<u>Phone</u>	<u>Response</u>
6/13/2014	COGCC	Carlos Lujan	970-625-2497	Notified via email and phone
6/13/2014	Chevron, Land Owner	Craig Tysse	970-285-9722	Notified via email and phone
6/13/2014	Garfield County	Kirby Winn	-	Notified via email

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

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

Signed: _____ Print Name: Jake Janicek

Title: EHS Professional Date: 08/25/2015 Email: jjanicek@caerusoilandgas.com

COA Type

Description

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Attachment Check List

Att Doc Num

Name

400889917	FORM 19 SUBMITTED
400889919	OTHER

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

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Total: 0 comment(s)

Parachute Creek 1 (Chevron 13D-17D) (Location ID 335780)
Partially Buried Vessel Removal
Spill/Release Point ID 437688
Form 19 (Notice of Completion)
Narrative Attachment

This Form 19 (Notice of Completion) was prepared for the purpose of describing completed work associated with the assessment of soil during the removal of a partially buried vessel (PBV) at the Parachute Creek 1 (Chevron 13D-17D) (Location ID 335780) in the Caerus Piceance, LLC (Caerus) area of operations. This assessment was conducted using procedures approved under Colorado Oil and Gas Conservation Commission (COGCC) Remediation #8164. A Sample Location Map is included as an attachment to this form.

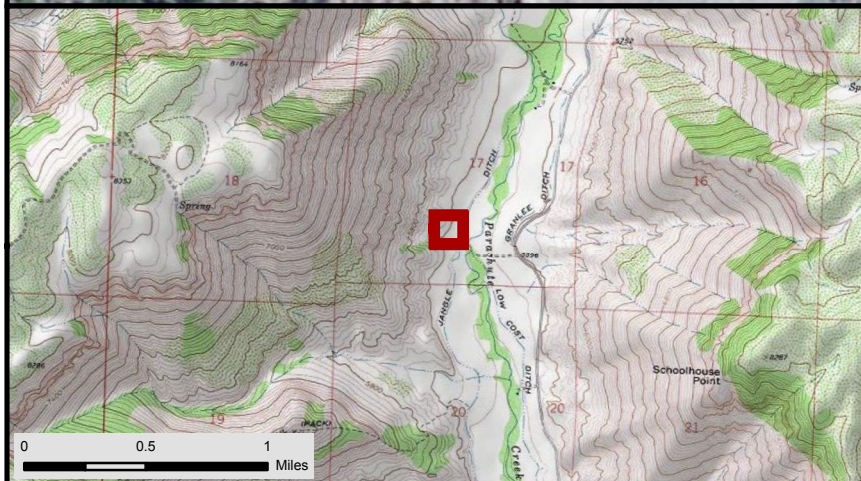
Upon removing the PBV from the ground, visual observations and field screening of soil around and below the tank indicated that impacted soil was present. Excavation of the impacted soil was conducted and field screen readings were utilized to determine the extent of the impacts. Approximately 490 cubic yards of soil was removed during excavation activities and remediated onsite.

On June 10 and 11, 2014 confirmation soil samples were collected from the soil around and beneath the removed PBV (North Wall 6', Footprint, 12', West Wall, 7', East Wall, 6.5', and South Wall, 7'). Soil samples were submitted for laboratory analysis of all COGCC Table 910-1 analytes. Analytical results indicate all soil samples were in compliance with COGCC Table 910-1 Concentration Levels for all analytes, were within background concentrations, or were within the arsenic range allowed by the COGCC (1.25x background concentration), except for the sodium adsorption ratio (SAR) and electrical conductivity (EC) measurements of soil samples North Wall 6', West Wall, 7', and Footprint, 12'. However, these confirmation samples were collected at a depth greater than three feet below the ground surface and the COGCC does not apply the Concentration Levels for SAR and EC to soils deeper than three feet below ground surface. Background samples were collected from an undisturbed area west of the pad surface. Sample locations are depicted on the attached Sample Location Map and laboratory analytical results are summarized in the attached analytical table. Laboratory analytical reports are included as an attachment.

All impacted soil removed during excavation activities was stockpiled onsite for remediation. On August 22, 2014, a confirmation soil sample was collected from the removed soil (5 Point Composite). The soil sample was submitted for laboratory analysis of total petroleum hydrocarbons (TPH), Resource Conservation and Recovery Act Metals, a full list of volatile organic compounds, ignitability, and paint filter. Analytical results indicate the soil sample was in compliance with COGCC Table 910-1 Concentration Levels or were within background concentrations, except for TPH. The soil pile was stirred/agitated the following spring in order to remediate the soil to below COGCC Table 910-1 Concentration Levels. On June 2, 2015, an additional confirmation soil sample was collected from the removed soil (Parachute Creek 1 Landfarm). The soil sample was submitted for laboratory analysis of TPH, COGCC Table 910-1 polycyclic aromatic hydrocarbons, EC, SAR, pH, chromium (III), chromium (VI), copper, nickel, and zinc. Analytical results indicate the soil sample was in compliance with COGCC Table 910-1 Concentration Levels for all analytes, except for EC. However, the soil will be

buried at a depth greater than three feet below the ground surface and the COGCC does not apply the Concentration Levels for EC to soils deeper than three feet below ground surface. Laboratory analytical results are summarized in the attached analytical table and laboratory analytical reports are included as an attachment. The remediated soil was used in support of the ongoing remediation project at the Parachute Creek 5 (Location ID 335781, Spill/Release Point ID 442525) pad location to build landfarm containment berms and as excavation backfill material.

Based on removal of the PBV and soil analytical results, Caerus requests an NFA designation for this project.



CAERUS **Sample Location Map**
 OIL AND GAS LLC
 Caerus Chevron 13D-17D
 (Parachute Creek 1)

39.520120 -108.133234
 Section 17, Township 6 South, Range 96 West

● Sample Location	Transportation	Hydrography
▨ Excavated Area	— CO Highways	— Ditch
PLSS	— County Roads	— Intermittent Stream
▭ Township	— Local Streets	— Perennial Stream
▭ Section	— WPX Access	— Waterbody
		— Watershed



Author: R. Young

Revision: 0

Date: 7/2/2014

TABLE 1
PARACHUTE CREEK 1
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	North Wall 6'	South Wall, 7'	East Wall, 6.5'	West Wall, 7'	Footprint, 12'	5 Point Composite	Parachute Creek 1 Landfarm	BKGD 01	BKGD 02	BKGD 03
Sample Date			6/11/2014	6/10/2014	6/11/2014	6/10/2014	6/11/2014	8/22/2014	6/2/2015	6/27/2014	6/27/2014	6/27/2014
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Confirmation	Confirmation	Confirmation	Background	Background	Background
Arsenic	0.39	mg/kg	5.2	6.9	10	7.0	4.2	8.3	NA	8.5	8.0	8.4
Barium	15,000	mg/kg	82	200	210	140	190	240	NA	NA	NA	NA
Cadmium	70	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
Chromium (III)	120,000	mg/kg	12	11	10	10	12	NA	11	NA	NA	NA
Chromium (VI)	23	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Copper	3,100	mg/kg	16	14	18	17	16	NA	19	NA	NA	NA
Lead	400	mg/kg	14	12	14	13	13	15	NA	NA	NA	NA
Mercury	23	mg/kg	0.036	ND	0.024	0.028	ND	0.032	NA	NA	NA	NA
Nickel	1,600	mg/kg	27	15	16	18	21	NA	19	NA	NA	NA
Selenium	390	mg/kg	4.1	3.6	2.4	2.6	3.0	ND	NA	NA	NA	NA
Silver	390	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
Zinc	23,000	mg/kg	87	57	74	63	70	NA	78	NA	NA	NA
EC	4 or 2x background	mmhos/cm	8.6	2.1	3.0	15	7.6	NA	7.5	NA	NA	1.4
pH	6-9	SU	7.6	8.0	7.8	7.9	7.8	NA	8.3	NA	NA	8.0
SAR	12	unitless	9.3	4.8	4.9	22	7.7	NA	7.1	NA	NA	0.34
TPH-GRO			ND	ND	ND	28	ND	950	ND	NA	NA	NA
TPH-DRO			20	13	14	12	14	100	39	NA	NA	NA
TPH	500	mg/kg	20	13	14	40	14	1,050	39	NA	NA	NA
Benzene	0.17	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
Toluene	85	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
Ethylbenzene	100	mg/kg	ND	ND	ND	ND	ND	0.066	NA	NA	NA	NA
Total Xylenes	175	mg/kg	ND	ND	ND	ND	ND	1.2	NA	NA	NA	NA
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Anthracene	1,000	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Benz(a)anthracene	0.22	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Benzo(b)fluoranthene	0.22	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Benzo(k)fluoranthene	2.2	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Benzo(a)pyrene	0.022	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Chrysene	22	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Dibenzo(a,h)anthracene	0.022	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Fluorene	1,000	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Naphthalene	23	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA
Pyrene	1,000	mg/kg	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA

Notes:

Highlight - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

EC - electrical conductivity

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

NA - not analyzed

ND - less than the stated reporting limit

SAR - sodium adsorption ratio

SU - standard unit

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO



17-Jun-2014

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

Re: **Caerus Parachute Creek 1 PBV Removal 6.11.14**

Work Order: **1406590**

Dear Mark,

ALS Environmental received 5 samples on 11-Jun-2014 03:40 PM 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 33.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: MN 532786

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 The ALS logo, a small blue triangle with a yellow flame-like shape inside.

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Work Order: 1406590

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>
1406590-01	North Wall 6'	Soil		6/11/2014 12:55	6/11/2014 15:40	<input type="checkbox"/>
1406590-02	South Wall, 7'	Soil		6/10/2014 13:53	6/11/2014 15:40	<input type="checkbox"/>
1406590-03	East Wall, 6.5'	Soil		6/11/2014 10:50	6/11/2014 15:40	<input type="checkbox"/>
1406590-04	West Wall, 7'	Soil		6/10/2014 13:56	6/11/2014 15:40	<input type="checkbox"/>
1406590-05	Footprint, 12'	Soil		6/11/2014 14:22	6/11/2014 15:40	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Work Order: 1406590

Case Narrative

Batch 59637 sample Footprint, 12' MS/MSD recoveries for Chromium were above control limits. The corresponding result in the parent sample may be biased high for Chromium. The MS/MSD recoveries for Barium and Zinc were above control limits, however, the results in the parent sample were greater than 4x the spiked amount. No qualification is required for Barium and Zinc. The MS recovery for Arsenic was above control limits. BD recovery and RPD met quality control criteria. No data requires qualification for Arsenic.

Batch 59640 duplicate data for pH is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
WorkOrder: 1406590

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte 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

<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
µg/Kg-dry	Micrograms per Kilogram Dry Weight
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: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: North Wall 6'
Collection Date: 6/11/2014 12:55 PM

Work Order: 1406590
Lab ID: 1406590-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 6/12/14	Analyst: IT
DRO (C10-C28)	20		4.9	mg/Kg-dry	1	6/13/2014 01:20 AM
Surr: 4-Terphenyl-d14	103		39-133	%REC	1	6/13/2014 01:20 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 6/12/14	Analyst: IT
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	6/12/2014 09:09 PM
Surr: Toluene-d8	102		50-150	%REC	1	6/12/2014 09:09 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 6/12/14	Analyst: LR
Mercury	0.036		0.015	mg/Kg-dry	1	6/12/2014 09:01 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 6/12/14	Analyst: ML
Arsenic	5.2		2.4	mg/Kg-dry	5	6/16/2014
Barium	82		2.4	mg/Kg-dry	5	6/16/2014
Cadmium	ND		0.95	mg/Kg-dry	5	6/16/2014
Chromium	12		2.4	mg/Kg-dry	5	6/16/2014
Copper	16		2.4	mg/Kg-dry	5	6/16/2014
Lead	14		2.4	mg/Kg-dry	5	6/16/2014
Nickel	27		2.4	mg/Kg-dry	5	6/16/2014
Selenium	4.1		2.4	mg/Kg-dry	5	6/16/2014
Silver	ND		2.4	mg/Kg-dry	5	6/16/2014
Zinc	87		4.7	mg/Kg-dry	5	6/16/2014
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Calcium	560		10	mg/L	20	6/16/2014 05:24 PM
Magnesium	230		4.0	mg/L	20	6/16/2014 05:24 PM
Sodium	1,000		4.0	mg/L	20	6/16/2014 05:24 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Sodium Adsorption Ratio	9.3		0.010	none	1	6/16/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 6/12/14	Analyst: RM
Acenaphthene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Chrysene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: North Wall 6'
Collection Date: 6/11/2014 12:55 PM

Work Order: 1406590
Lab ID: 1406590-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Fluorene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Naphthalene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 10:30 PM
Surr: 2-Fluorobiphenyl	75.3		12-100	%REC	1	6/12/2014 10:30 PM
Surr: 4-Terphenyl-d14	100		25-137	%REC	1	6/12/2014 10:30 PM
Surr: Nitrobenzene-d5	67.6		37-107	%REC	1	6/12/2014 10:30 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/12/14		Analyst: AK
Benzene	ND		36	µg/Kg-dry	1	6/12/2014 05:20 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	6/12/2014 05:20 PM
m,p-Xylene	ND		71	µg/Kg-dry	1	6/12/2014 05:20 PM
o-Xylene	ND		36	µg/Kg-dry	1	6/12/2014 05:20 PM
Toluene	ND		36	µg/Kg-dry	1	6/12/2014 05:20 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/12/2014 05:20 PM
Surr: 1,2-Dichloroethane-d4	93.1		70-130	%REC	1	6/12/2014 05:20 PM
Surr: 4-Bromofluorobenzene	92.0		70-130	%REC	1	6/12/2014 05:20 PM
Surr: Dibromofluoromethane	93.6		70-130	%REC	1	6/12/2014 05:20 PM
Surr: Toluene-d8	92.3		70-130	%REC	1	6/12/2014 05:20 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 6/16/14		Analyst: JB
Electrical Conductivity @ Saturation	8.6		0.050	mmhos/cm @25	10	6/16/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	12		0.59	mg/Kg-dry	1	6/17/2014 08:04 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 6/13/14		Analyst: JI
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	6/16/2014 01:00 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	16		0.050	% of sample	1	6/12/2014 04:03 PM
PH			SW9045D	Prep: EXTRACT / 6/12/14		Analyst: AT
pH	7.6			s.u.	1	6/12/2014 04:19 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: South Wall, 7'
Collection Date: 6/10/2014 01:53 PM

Work Order: 1406590
Lab ID: 1406590-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	13		SW8015M		Prep: SW3541 / 6/12/14	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	97.3		4.7	mg/Kg-dry	1	6/13/2014 01:50 AM
			39-133	%REC	1	6/13/2014 01:50 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 6/12/14	Analyst: IT
<i>Surr: Toluene-d8</i>	101		2.9	mg/Kg-dry	1	6/12/2014 08:18 PM
			50-150	%REC	1	6/12/2014 08:18 PM
MERCURY BY CVAA						
Mercury	ND		SW7471		Prep: SW7471 / 6/12/14	Analyst: LR
			0.015	mg/Kg-dry	1	6/12/2014 09:03 PM
METALS BY ICP-MS						
Arsenic	6.9		SW6020A		Prep: SW3050B / 6/12/14	Analyst: ML
Barium	200		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Cadmium	ND		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Chromium	11		0.92	mg/Kg-dry	5	6/16/2014 12:06 AM
Copper	14		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Lead	12		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Nickel	15		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Selenium	3.6		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Silver	ND		2.3	mg/Kg-dry	5	6/16/2014 12:06 AM
Zinc	57		4.6	mg/Kg-dry	5	6/16/2014 12:06 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Calcium	160		10	mg/L	20	6/16/2014 05:31 PM
Magnesium	45		4.0	mg/L	20	6/16/2014 05:31 PM
Sodium	270		4.0	mg/L	20	6/16/2014 05:31 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Sodium Adsorption Ratio	4.8		0.010	none	1	6/16/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 6/12/14	Analyst: RM
Acenaphthene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Acenaphthylene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Anthracene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Benzo(a)anthracene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Benzo(a)pyrene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Benzo(b)fluoranthene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Benzo(g,h,i)perylene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Benzo(k)fluoranthene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Chrysene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: South Wall, 7'
Collection Date: 6/10/2014 01:53 PM

Work Order: 1406590
Lab ID: 1406590-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Fluoranthene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Fluorene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Indeno(1,2,3-cd)pyrene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Naphthalene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Pyrene	ND		7.6	µg/Kg-dry	1	6/12/2014 10:51 PM
Surr: 2-Fluorobiphenyl	66.8		12-100	%REC	1	6/12/2014 10:51 PM
Surr: 4-Terphenyl-d14	98.2		25-137	%REC	1	6/12/2014 10:51 PM
Surr: Nitrobenzene-d5	58.3		37-107	%REC	1	6/12/2014 10:51 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/12/14 Analyst: AK		
Benzene	ND		34	µg/Kg-dry	1	6/12/2014 05:44 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	6/12/2014 05:44 PM
m,p-Xylene	ND		68	µg/Kg-dry	1	6/12/2014 05:44 PM
o-Xylene	ND		34	µg/Kg-dry	1	6/12/2014 05:44 PM
Toluene	ND		34	µg/Kg-dry	1	6/12/2014 05:44 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	6/12/2014 05:44 PM
Surr: 1,2-Dichloroethane-d4	95.6		70-130	%REC	1	6/12/2014 05:44 PM
Surr: 4-Bromofluorobenzene	90.8		70-130	%REC	1	6/12/2014 05:44 PM
Surr: Dibromofluoromethane	94.7		70-130	%REC	1	6/12/2014 05:44 PM
Surr: Toluene-d8	93.0		70-130	%REC	1	6/12/2014 05:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 6/16/14 Analyst: JB		
Electrical Conductivity @ Saturation	2.1		0.050	mmhos/cm @25	10	6/16/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	11		0.57	mg/Kg-dry	1	6/17/2014 08:04 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 6/13/14 Analyst: JI		
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	6/16/2014 01:00 PM
MOISTURE			A2540 G	Analyst: TM		
Moisture	12		0.050	% of sample	1	6/12/2014 04:03 PM
PH			SW9045D	Prep: EXTRACT / 6/12/14 Analyst: AT		
pH	8.0			s.u.	1	6/12/2014 04:19 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: East Wall, 6.5'
Collection Date: 6/11/2014 10:50 AM

Work Order: 1406590
Lab ID: 1406590-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 6/12/14	Analyst: IT
DRO (C10-C28)	14		4.8	mg/Kg-dry	1	6/13/2014 02:50 AM
Surr: 4-Terphenyl-d14	89.4		39-133	%REC	1	6/13/2014 02:50 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 6/12/14	Analyst: IT
GRO (C6-C10)	ND		2.9	mg/Kg-dry	1	6/12/2014 10:26 PM
Surr: Toluene-d8	95.5		50-150	%REC	1	6/12/2014 10:26 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 6/12/14	Analyst: LR
Mercury	0.024		0.015	mg/Kg-dry	1	6/12/2014 09:06 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 6/12/14	Analyst: ML
Arsenic	10		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Barium	210		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Cadmium	ND		0.96	mg/Kg-dry	5	6/16/2014 01:47 AM
Chromium	11		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Copper	18		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Lead	14		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Nickel	16		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Selenium	2.4	J	2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Silver	ND		2.4	mg/Kg-dry	5	6/16/2014 01:47 AM
Zinc	74		4.8	mg/Kg-dry	5	6/16/2014 01:47 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Calcium	160		10	mg/L	20	6/16/2014 05:37 PM
Magnesium	46		4.0	mg/L	20	6/16/2014 05:37 PM
Sodium	270		4.0	mg/L	20	6/16/2014 05:37 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Sodium Adsorption Ratio	4.9		0.010	none	1	6/16/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 6/12/14	Analyst: RM
Acenaphthene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Chrysene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: East Wall, 6.5'
Collection Date: 6/11/2014 10:50 AM

Work Order: 1406590
Lab ID: 1406590-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Fluorene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Naphthalene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 08:46 PM
Surr: 2-Fluorobiphenyl	66.2		12-100	%REC	1	6/12/2014 08:46 PM
Surr: 4-Terphenyl-d14	91.9		25-137	%REC	1	6/12/2014 08:46 PM
Surr: Nitrobenzene-d5	55.9		37-107	%REC	1	6/12/2014 08:46 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/12/14 Analyst: AK		
Benzene	ND		35	µg/Kg-dry	1	6/12/2014 06:09 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	6/12/2014 06:09 PM
m,p-Xylene	ND		70	µg/Kg-dry	1	6/12/2014 06:09 PM
o-Xylene	ND		35	µg/Kg-dry	1	6/12/2014 06:09 PM
Toluene	ND		35	µg/Kg-dry	1	6/12/2014 06:09 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/12/2014 06:09 PM
Surr: 1,2-Dichloroethane-d4	94.4		70-130	%REC	1	6/12/2014 06:09 PM
Surr: 4-Bromofluorobenzene	93.2		70-130	%REC	1	6/12/2014 06:09 PM
Surr: Dibromofluoromethane	92.8		70-130	%REC	1	6/12/2014 06:09 PM
Surr: Toluene-d8	92.1		70-130	%REC	1	6/12/2014 06:09 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 6/16/14 Analyst: JB		
Electrical Conductivity @ Saturation	3.0		0.050	mmhos/cm @25	10	6/16/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	10		0.58	mg/Kg-dry	1	6/17/2014 08:04 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 6/13/14 Analyst: JI		
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	6/16/2014 01:00 PM
MOISTURE			A2540 G	Analyst: TM		
Moisture	14		0.050	% of sample	1	6/12/2014 04:03 PM
PH			SW9045D	Prep: EXTRACT / 6/12/14 Analyst: AT		
pH	7.8			s.u.	1	6/12/2014 04:19 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: West Wall, 7'
Collection Date: 6/10/2014 01:56 PM

Work Order: 1406590
Lab ID: 1406590-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 6/12/14	Analyst: IT
DRO (C10-C28)	12		4.9	mg/Kg-dry	1	6/13/2014 03:20 AM
Surr: 4-Terphenyl-d14	88.4		39-133	%REC	1	6/13/2014 03:20 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 6/12/14	Analyst: IT
GRO (C6-C10)	28		2.9	mg/Kg-dry	1	6/12/2014 10:52 PM
Surr: Toluene-d8	105		50-150	%REC	1	6/12/2014 10:52 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 6/12/14	Analyst: LR
Mercury	0.028		0.016	mg/Kg-dry	1	6/12/2014 09:08 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 6/12/14	Analyst: ML
Arsenic	7.0		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Barium	140		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Cadmium	ND		0.91	mg/Kg-dry	5	6/16/2014 01:52 AM
Chromium	10		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Copper	17		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Lead	13		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Nickel	18		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Selenium	2.6		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Silver	ND		2.3	mg/Kg-dry	5	6/16/2014 01:52 AM
Zinc	63		4.6	mg/Kg-dry	5	6/16/2014 01:52 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Calcium	380		10	mg/L	20	6/16/2014 05:43 PM
Magnesium	190		4.0	mg/L	20	6/16/2014 05:43 PM
Sodium	2,100		4.0	mg/L	20	6/16/2014 05:43 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Sodium Adsorption Ratio	22		0.010	none	1	6/16/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 6/12/14	Analyst: RM
Acenaphthene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Chrysene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: West Wall, 7'
Collection Date: 6/10/2014 01:56 PM

Work Order: 1406590
Lab ID: 1406590-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Fluoranthene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Fluorene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Naphthalene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Pyrene	ND		7.8	µg/Kg-dry	1	6/12/2014 11:12 PM
Surr: 2-Fluorobiphenyl	67.2		12-100	%REC	1	6/12/2014 11:12 PM
Surr: 4-Terphenyl-d14	96.6		25-137	%REC	1	6/12/2014 11:12 PM
Surr: Nitrobenzene-d5	58.6		37-107	%REC	1	6/12/2014 11:12 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/12/14		Analyst: AK
Benzene	ND		35	µg/Kg-dry	1	6/12/2014 06:34 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	6/12/2014 06:34 PM
m,p-Xylene	ND		71	µg/Kg-dry	1	6/12/2014 06:34 PM
o-Xylene	ND		35	µg/Kg-dry	1	6/12/2014 06:34 PM
Toluene	ND		35	µg/Kg-dry	1	6/12/2014 06:34 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/12/2014 06:34 PM
Surr: 1,2-Dichloroethane-d4	94.8		70-130	%REC	1	6/12/2014 06:34 PM
Surr: 4-Bromofluorobenzene	91.7		70-130	%REC	1	6/12/2014 06:34 PM
Surr: Dibromofluoromethane	92.6		70-130	%REC	1	6/12/2014 06:34 PM
Surr: Toluene-d8	91.7		70-130	%REC	1	6/12/2014 06:34 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 6/16/14		Analyst: JB
Electrical Conductivity @ Saturation	15		0.050	mmhos/cm @25	10	6/16/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	10		0.59	mg/Kg-dry	1	6/17/2014 08:04 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 6/13/14		Analyst: JI
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	6/16/2014 01:00 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	15		0.050	% of sample	1	6/12/2014 04:03 PM
PH			SW9045D	Prep: EXTRACT / 6/12/14		Analyst: AT
pH	7.9			s.u.	1	6/12/2014 04:19 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc

Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

Work Order: 1406590

Sample ID: Footprint, 12'

Lab ID: 1406590-05

Collection Date: 6/11/2014 02:22 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	14		SW8015M		Prep: SW3541 / 6/12/14	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	<i>84.9</i>		<i>39-133</i>	<i>%REC</i>	<i>1</i>	<i>6/13/2014 03:50 AM</i>
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 6/12/14	Analyst: IT
<i>Surr: Toluene-d8</i>	<i>99.9</i>		<i>50-150</i>	<i>%REC</i>	<i>1</i>	<i>6/12/2014 11:17 PM</i>
MERCURY BY CVAA						
Mercury	ND		SW7471		Prep: SW7471 / 6/12/14	Analyst: LR
METALS BY ICP-MS						
Arsenic	4.2		SW6020A		Prep: SW3050B / 6/12/14	Analyst: ML
Barium	190					
Cadmium	ND					
Chromium	12					
Copper	16					
Lead	13					
Nickel	21					
Selenium	3.0					
Silver	ND					
Zinc	70					
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Calcium	430		10	mg/L	20	6/16/2014 05:49 PM
Magnesium	150		4.0	mg/L	20	6/16/2014 05:49 PM
Sodium	730		4.0	mg/L	20	6/16/2014 05:49 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 6/16/14	Analyst: RH
Sodium Adsorption Ratio	7.7		0.010	none	1	6/16/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 6/12/14	Analyst: RM
Acenaphthene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Acenaphthylene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Anthracene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Benzo(a)anthracene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Benzo(g,h,i)perylene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Chrysene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM

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

ALS Group USA, Corp

Date: 17-Jun-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14
Sample ID: Footprint, 12'
Collection Date: 6/11/2014 02:22 PM

Work Order: 1406590
Lab ID: 1406590-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Fluoranthene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Fluorene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Naphthalene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Pyrene	ND		7.9	µg/Kg-dry	1	6/12/2014 11:32 PM
Surr: 2-Fluorobiphenyl	67.7		12-100	%REC	1	6/12/2014 11:32 PM
Surr: 4-Terphenyl-d14	95.0		25-137	%REC	1	6/12/2014 11:32 PM
Surr: Nitrobenzene-d5	58.8		37-107	%REC	1	6/12/2014 11:32 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/12/14		Analyst: AK
Benzene	ND		35	µg/Kg-dry	1	6/12/2014 06:58 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	6/12/2014 06:58 PM
m,p-Xylene	ND		71	µg/Kg-dry	1	6/12/2014 06:58 PM
o-Xylene	ND		35	µg/Kg-dry	1	6/12/2014 06:58 PM
Toluene	ND		35	µg/Kg-dry	1	6/12/2014 06:58 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/12/2014 06:58 PM
Surr: 1,2-Dichloroethane-d4	94.0		70-130	%REC	1	6/12/2014 06:58 PM
Surr: 4-Bromofluorobenzene	95.4		70-130	%REC	1	6/12/2014 06:58 PM
Surr: Dibromofluoromethane	92.0		70-130	%REC	1	6/12/2014 06:58 PM
Surr: Toluene-d8	92.8		70-130	%REC	1	6/12/2014 06:58 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 6/16/14		Analyst: JB
Electrical Conductivity @ Saturation	7.6		0.050	mmhos/cm @25	10	6/16/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	12		0.59	mg/Kg-dry	1	6/17/2014 08:04 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 6/13/14		Analyst: JI
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	6/16/2014 01:00 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	15		0.050	% of sample	1	6/12/2014 04:03 PM
PH			SW9045D	Prep: EXTRACT / 6/12/14		Analyst: AT
pH	7.8			s.u.	1	6/12/2014 04:19 PM

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

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1406590

Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

Batch ID: 59603

Instrument ID GC8

Method: SW8015C

MBLK		Sample ID: DBLKS1-59603-59603				Units: mg/Kg		Analysis Date: 6/12/2014 05:19 PM		
Client ID:		Run ID: GC8_140612A				SeqNo: 2806601		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.654	0	1.667	0	99.2	39-133	0			

LCS		Sample ID: DLCSS1-59603-59603				Units: mg/Kg		Analysis Date: 6/12/2014 05:49 PM		
Client ID:		Run ID: GC8_140612A				SeqNo: 2806605		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	151.5	4.2	166.7	0	90.9	61-109	0			
Surr: 4-Terphenyl-d14	1.371	0	1.667	0	82.3	39-133	0			

MS		Sample ID: 1406469-01C MS				Units: mg/Kg		Analysis Date: 6/12/2014 06:19 PM		
Client ID:		Run ID: GC8_140612A				SeqNo: 2806607		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	281.8	8.1	323.2	12.39	83.4	48-110	0			
Surr: 4-Terphenyl-d14	2.732	0	3.232	0	84.5	39-133	0			

MSD		Sample ID: 1406469-01C MSD				Units: mg/Kg		Analysis Date: 6/12/2014 06:49 PM		
Client ID:		Run ID: GC8_140612A				SeqNo: 2806609		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	286.2	8.2	329.4	12.39	83.1	48-110	281.8	1.56	30	
Surr: 4-Terphenyl-d14	2.64	0	3.294	0	80.1	39-133	2.732	3.42	30	

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59614** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-59614-59614				Units: µg/Kg		Analysis Date: 6/12/2014 07:26 PM		
Client ID:		Run ID: GC9_140612A				SeqNo: 2806861		Prep Date: 6/12/2014		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								
<i>Surr: Toluene-d8</i>	4787	0	5000	0	95.7	50-150	0			

LCS		Sample ID: LCS-59614-59614				Units: µg/Kg		Analysis Date: 6/12/2014 07:00 PM		
Client ID:		Run ID: GC9_140612A				SeqNo: 2806860		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	449800	2,500	500000	0	90	70-130	0			
<i>Surr: Toluene-d8</i>	5818	0	5000	0	116	50-150	0			

MS		Sample ID: 1406590-01A MS				Units: µg/Kg		Analysis Date: 6/13/2014 12:24 PM		
Client ID: North Wall 6'		Run ID: GC9_140613A				SeqNo: 2807511		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	439200	2,500	500000	0	87.8	70-130	0			
<i>Surr: Toluene-d8</i>	5380	0	5000	0	108	50-150	0			

MSD		Sample ID: 1406590-01A MSD				Units: µg/Kg		Analysis Date: 6/13/2014 12:50 PM		
Client ID: North Wall 6'		Run ID: GC9_140613A				SeqNo: 2807512		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	412100	2,500	500000	0	82.4	70-130	439200	6.36	30	
<i>Surr: Toluene-d8</i>	5856	0	5000	0	117	50-150	5380	8.46	30	

The following samples were analyzed in this batch:

1406590-01A	1406590-02A	1406590-03A
1406590-04A	1406590-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59647** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-59647-59647				Units: mg/Kg		Analysis Date: 6/12/2014 08:12 PM		
Client ID:		Run ID: HG1_140612A				SeqNo: 2806590		Prep Date: 6/12/2014		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-59647-59647				Units: mg/Kg		Analysis Date: 6/12/2014 08:15 PM		
Client ID:		Run ID: HG1_140612A				SeqNo: 2806591		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1737 0.020 0.1665 0 104 80-120 0

MS		Sample ID: 1406590-05BMS				Units: mg/Kg		Analysis Date: 6/12/2014 09:13 PM		
Client ID: Footprint, 12'		Run ID: HG1_140612A				SeqNo: 2806634		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1286 0.013 0.1048 0.01224 111 75-125 0

MSD		Sample ID: 1406590-05BMSD				Units: mg/Kg		Analysis Date: 6/12/2014 09:15 PM		
Client ID: Footprint, 12'		Run ID: HG1_140612A				SeqNo: 2806636		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1225 0.012 0.1026 0.01224 107 75-125 0.1286 4.87 35

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59637** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK				Sample ID: MBLK-59637-59637				Units: mg/Kg		Analysis Date: 6/15/2014 11:49 PM	
Client ID:			Run ID: ICPMS1_140615A			SeqNo: 2808844		Prep Date: 6/12/2014		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	0.002234	0.10								J	
Chromium	ND	0.25									
Copper	ND	0.25									
Lead	ND	0.25									
Nickel	ND	0.25									
Selenium	ND	0.25									
Silver	0.001213	0.25								J	
Zinc	0.02229	0.50								J	

LCS				Sample ID: LCS-59637-59637				Units: mg/Kg			Analysis Date: 6/15/2014 11:55 PM			
Client ID:				Run ID: ICPMS1_140615A				SeqNo: 2808845			Prep Date: 6/12/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Arsenic	4.22	0.25	5	0	84.4	80-120	0							
Barium	4.409	0.25	5	0	88.2	80-120	0							
Cadmium	4.288	0.10	5	0	85.8	80-120	0							
Chromium	4.771	0.25	5	0	95.4	80-120	0							
Copper	4.694	0.25	5	0	93.9	80-120	0							
Lead	4.33	0.25	5	0	86.6	80-120	0							
Nickel	4.722	0.25	5	0	94.4	80-120	0							
Selenium	4.162	0.25	5	0	83.2	80-120	0							
Silver	4.728	0.25	5	0	94.6	80-120	0							
Zinc	4.48	0.50	5	0	89.6	80-120	0							

MS					Sample ID: 1406590-05BMS		Units: mg/Kg		Analysis Date: 6/16/2014 02:04 AM		
Client ID: Footprint, 12'			Run ID: ICPMS1_140615A			SeqNo: 2808866		Prep Date: 6/12/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	12.32	1.7	6.784	3.584	129	75-125	0			S	
Barium	202.5	1.7	6.784	162.4	591	75-125	0			SO	
Cadmium	6.991	0.68	6.784	0.3903	97.3	75-125	0				
Chromium	20.15	1.7	6.784	10.35	145	75-125	0			S	
Copper	20.13	1.7	6.784	13.65	95.5	75-125	0				
Lead	18.44	1.7	6.784	11.22	106	75-125	0				
Nickel	25.13	1.7	6.784	17.62	111	75-125	0				
Selenium	8.056	1.7	6.784	2.55	81.2	75-125	0				
Silver	6.106	1.7	6.784	0.05144	89.2	75-125	0				
Zinc	71.37	3.4	6.784	59.67	172	75-125	0			SO	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59637** Instrument ID **ICPMS1** Method: **SW6020A**

MSD				Sample ID: 1406590-05BMSD			Units: mg/Kg		Analysis Date: 6/16/2014 02:10 AM		
Client ID: Footprint, 12'			Run ID: ICPMS1_140615A			SeqNo: 2808868		Prep Date: 6/12/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.61	1.7	6.702	3.584	105	75-125	12.32	14.9	25	SO	
Barium	208.4	1.7	6.702	162.4	686	75-125	202.5	2.87	25		
Cadmium	6.917	0.67	6.702	0.3903	97.4	75-125	6.991	1.07	25		
Chromium	20.15	1.7	6.702	10.35	146	75-125	20.15	0.00914	25	S	
Copper	19.95	1.7	6.702	13.65	94	75-125	20.13	0.894	25		
Lead	18.24	1.7	6.702	11.22	105	75-125	18.44	1.07	25		
Nickel	24.9	1.7	6.702	17.62	109	75-125	25.13	0.931	25		
Selenium	8.113	1.7	6.702	2.55	83	75-125	8.056	0.705	25		
Silver	6.099	1.7	6.702	0.05144	90.2	75-125	6.106	0.109	25		
Zinc	70.14	3.4	6.702	59.67	156	75-125	71.37	1.74	25		
										SO	

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59671** Instrument ID **ICPMS2** Method: **SW6020A**

DUP		Sample ID: 1406422-01CDUP				Units: mg/L		Analysis Date: 6/16/2014 05:06 PM		
Client ID:		Run ID: ICPMS2_140616A				SeqNo: 2811295		Prep Date: 6/16/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	84.3	10	0	0	0	0-0	65.2	25.6		
Magnesium	21.78	4.0	0	0	0	0-0	16.73	26.2		
Sodium	177.6	4.0	0	0	0	0-0	120.5	38.3		

The following samples were analyzed in this batch:

1406590-01C	1406590-02C	1406590-03C
1406590-04C	1406590-05C	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59630** Instrument ID **SVMS8** Method: **SW8270**

MBLK		Sample ID: SBLKS1-59630-59630				Units: µg/Kg		Analysis Date: 6/12/2014 05:05 PM		
Client ID:		Run ID: SVMS8_140612A				SeqNo: 2807465		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1195	0	1667	0	71.7	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1554	0	1667	0	93.3	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1387	0	1667	0	83.2	37-107	0			

LCS		Sample ID: SLCSS1-59630-59630				Units: µg/Kg		Analysis Date: 6/12/2014 05:25 PM		
Client ID:		Run ID: SVMS8_140612A				SeqNo: 2807747		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	492.3	6.7	666.7	0	73.8	45-110	0			
Acenaphthylene	479.7	6.7	666.7	0	71.9	45-105	0			
Anthracene	565.7	6.7	666.7	0	84.8	55-105	0			
Benzo(a)anthracene	596	6.7	666.7	0	89.4	50-110	0			
Benzo(a)pyrene	612.7	6.7	666.7	0	91.9	50-110	0			
Benzo(b)fluoranthene	599	6.7	666.7	0	89.8	45-115	0			
Benzo(g,h,i)perylene	580.3	6.7	666.7	0	87	40-125	0			
Benzo(k)fluoranthene	591	6.7	666.7	0	88.6	45-115	0			
Chrysene	579.7	6.7	666.7	0	86.9	55-110	0			
Dibenzo(a,h)anthracene	616	6.7	666.7	0	92.4	40-125	0			
Fluoranthene	601.7	6.7	666.7	0	90.2	55-115	0			
Fluorene	503	6.7	666.7	0	75.4	50-110	0			
Indeno(1,2,3-cd)pyrene	609	6.7	666.7	0	91.3	40-120	0			
Naphthalene	438.7	6.7	666.7	0	65.8	40-105	0			
Pyrene	589	6.7	666.7	0	88.3	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1065	0	1667	0	63.9	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1521	0	1667	0	91.2	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1310	0	1667	0	78.6	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59630** Instrument ID **SVMS8** Method: **SW8270**

MS				Sample ID: 1406590-03B MS			Units: µg/Kg		Analysis Date: 6/12/2014 08:04 PM	
Client ID: East Wall, 6.5'				Run ID: SVMS6_140612A			SeqNo: 2807478		Prep Date: 6/12/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	780.6	13	1267	0	61.6	45-110	0			
Acenaphthylene	834.4	13	1267	0	65.8	45-105	0			
Anthracene	1028	13	1267	0	81.1	55-105	0			
Benzo(a)anthracene	1043	13	1267	0	82.3	50-110	0			
Benzo(a)pyrene	1063	13	1267	0	83.8	50-110	0			
Benzo(b)fluoranthene	1061	13	1267	0	83.7	45-115	0			
Benzo(g,h,i)perylene	964.3	13	1267	0	76.1	40-125	0			
Benzo(k)fluoranthene	1054	13	1267	0	83.2	45-115	0			
Chrysene	1020	13	1267	0	80.5	55-110	0			
Dibenzo(a,h)anthracene	993.5	13	1267	0	78.4	40-125	0			
Fluoranthene	1148	13	1267	0	90.6	55-115	0			
Fluorene	935.8	13	1267	0	73.8	50-110	0			
Indeno(1,2,3-cd)pyrene	1019	13	1267	0	80.4	40-120	0			
Naphthalene	653.9	13	1267	0	51.6	40-105	0			
Pyrene	1074	13	1267	0	84.7	45-125	0			
Surr: 2-Fluorobiphenyl	1699	0	3168	0	53.6	12-100	0			
Surr: 4-Terphenyl-d14	2940	0	3168	0	92.8	25-137	0			
Surr: Nitrobenzene-d5	1506	0	3168	0	47.5	37-107	0			

MSD				Sample ID: 1406590-03B MSD			Units: µg/Kg		Analysis Date: 6/12/2014 08:25 PM	
Client ID: East Wall, 6.5'				Run ID: SVMS6_140612A			SeqNo: 2807479		Prep Date: 6/12/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	816.5	13	1255	0	65	45-110	780.6	4.5	30	
Acenaphthylene	878.7	13	1255	0	70	45-105	834.4	5.16	30	
Anthracene	1080	13	1255	0	86	55-105	1028	4.98	30	
Benzo(a)anthracene	1081	13	1255	0	86.1	50-110	1043	3.57	30	
Benzo(a)pyrene	1093	13	1255	0	87.1	50-110	1063	2.86	30	
Benzo(b)fluoranthene	1082	13	1255	0	86.2	45-115	1061	2	30	
Benzo(g,h,i)perylene	1137	13	1255	0	90.6	40-125	964.3	16.5	30	
Benzo(k)fluoranthene	1065	13	1255	0	84.8	45-115	1054	1.02	30	
Chrysene	1071	13	1255	0	85.3	55-110	1020	4.9	30	
Dibenzo(a,h)anthracene	1128	13	1255	0	89.9	40-125	993.5	12.7	30	
Fluoranthene	1162	13	1255	0	92.5	55-115	1148	1.18	30	
Fluorene	954	13	1255	0	76	50-110	935.8	1.92	30	
Indeno(1,2,3-cd)pyrene	1162	13	1255	0	92.6	40-120	1019	13.1	30	
Naphthalene	601.3	13	1255	0	47.9	40-105	653.9	8.38	30	
Pyrene	1143	13	1255	0	91	45-125	1074	6.22	30	
Surr: 2-Fluorobiphenyl	1804	0	3138	0	57.5	12-100	1699	6	40	
Surr: 4-Terphenyl-d14	3171	0	3138	0	101	25-137	2940	7.58	40	
Surr: Nitrobenzene-d5	1423	0	3138	0	45.4	37-107	1506	5.64	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59630** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59613** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-59613-59613				Units: µg/Kg			Analysis Date: 6/12/2014 05:32 PM		
Client ID:			Run ID: VMS5_140612A				SeqNo: 2806707			Prep Date: 6/12/2014		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	1011	0	1000	0	101	70-130		0					
Surr: 4-Bromofluorobenzene	988.5	0	1000	0	98.8	70-130		0					
Surr: Dibromofluoromethane	1038	0	1000	0	104	70-130		0					
Surr: Toluene-d8	971.5	0	1000	0	97.2	70-130		0					

LCS				Sample ID: LCS-59613-59613			Units: µg/Kg		Analysis Date: 6/12/2014 04:14 PM		
Client ID:		Run ID: VMS5_140612A			SeqNo: 2806706		Prep Date: 6/12/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1034	30	1000	0	103	75-125	0				
Ethylbenzene	1008	30	1000	0	101	75-125	0				
m,p-Xylene	2012	60	2000	0	101	80-125	0				
o-Xylene	991.5	30	1000	0	99.2	75-125	0				
Toluene	991.5	30	1000	0	99.2	70-125	0				
Xylenes, Total	3004	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	987.5	0	1000	0	98.8	70-130	0				
Surr: 4-Bromofluorobenzene	1010	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	1029	0	1000	0	103	70-130	0				
Surr: Toluene-d8	990.5	0	1000	0	99	70-130	0				

MS					Sample ID: 1406590-05A MS		Units: µg/Kg		Analysis Date: 6/12/2014 11:04 PM		
Client ID: Footprint, 12'			Run ID: VMS8_140612A			SeqNo: 2806774		Prep Date: 6/12/2014		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	88700	3,000	100000	0	88.7	75-125	0				
Ethylbenzene	102100	3,000	100000	0	102	75-125	0				
m,p-Xylene	204800	6,000	200000	0	102	80-125	0				
o-Xylene	100700	3,000	100000	0	101	75-125	0				
Toluene	98700	3,000	100000	0	98.7	70-125	0				
Xylenes, Total	305600	9,000	300000	0	102	75-125	0				
Surr: 1,2-Dichloroethane-d4	89350	0	100000	0	89.4	70-130	0				
Surr: 4-Bromofluorobenzene	91300	0	100000	0	91.3	70-130	0				
Surr: Dibromofluoromethane	92950	0	100000	0	93	70-130	0				
Surr: Toluene-d8	91500	0	100000	0	91.5	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59613** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 1406590-05A MSD			Units: µg/Kg		Analysis Date: 6/12/2014 11:28 PM	
Client ID: Footprint, 12'				Run ID: VMS8_140612A			SeqNo: 2806775		Prep Date: 6/12/2014	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	84650	3,000	100000	0	84.6	75-125	88700	4.67	30	
Ethylbenzene	98900	3,000	100000	0	98.9	75-125	102100	3.18	30	
m,p-Xylene	197200	6,000	200000	0	98.6	80-125	204800	3.78	30	
o-Xylene	97350	3,000	100000	0	97.4	75-125	100700	3.38	30	
Toluene	94150	3,000	100000	0	94.2	70-125	98700	4.72	30	
Xylenes, Total	294600	9,000	300000	0	98.2	75-125	305600	3.65	30	
Surr: 1,2-Dichloroethane-d4	87500	0	100000	0	87.5	70-130	89350	2.09	30	
Surr: 4-Bromofluorobenzene	91600	0	100000	0	91.6	70-130	91300	0.328	30	
Surr: Dibromofluoromethane	92550	0	100000	0	92.6	70-130	92950	0.431	30	
Surr: Toluene-d8	91600	0	100000	0	91.6	70-130	91500	0.109	30	

The following samples were analyzed in this batch:

1406590-01A	1406590-02A	1406590-03A
1406590-04A	1406590-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59640** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-59640-59640					Units: s.u.		Analysis Date: 6/12/2014 04:19 PM		
Client ID:			Run ID: WETCHEM_140612J			SeqNo: 2806117		Prep Date: 6/12/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 4.03 0 4 0 101 90-110 0

DUP		Sample ID: 1406150-01B DUP					Units: s.u.		Analysis Date: 6/12/2014 04:19 PM		
Client ID:		Run ID: WETCHEM_140612J					SeqNo: 2806119		Prep Date: 6/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 8.51 0 0 0 0 0-0 8.5 0.118 20 HH

DUP				Sample ID: 1406590-05B DUP				Units: s.u.			Analysis Date: 6/12/2014 04:19 PM			
Client ID: Footprint, 12'				Run ID: WETCHEM_140612J				SeqNo: 2806135			Prep Date: 6/12/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

pH 7.84 0 0 0 0 0-0 7.79 0.64 20

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59671** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1406422-01C DUP				Units: mmhos/cm @25°C		Analysis Date: 6/16/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_140616J				SeqNo: 2810265		Prep Date: 6/16/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.292	0.050	0	0	0		1.283	0.699	50	

The following samples were analyzed in this batch:

1406590-01C	1406590-02C	1406590-03C
1406590-04C	1406590-05C	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **59689** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-59689-59689				Units: mg/Kg		Analysis Date: 6/16/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140616M				SeqNo: 2810656		Prep Date: 6/13/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-59689-59689				Units: mg/Kg		Analysis Date: 6/16/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140616M				SeqNo: 2810657		Prep Date: 6/13/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.676 0.50 2 0 83.8 80-120 0

MS		Sample ID: 1406150-01BMS				Units: mg/Kg		Analysis Date: 6/16/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140616M				SeqNo: 2810659		Prep Date: 6/13/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.494 0.49 1.961 0 76.2 75-125 0

MS		Sample ID: 1406150-01BMSI				Units: mg/Kg		Analysis Date: 6/16/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140616M				SeqNo: 2810661		Prep Date: 6/13/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1227 49 1509 0 81.3 75-125 0

MSD		Sample ID: 1406150-01BMSD				Units: mg/Kg		Analysis Date: 6/16/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140616M				SeqNo: 2810660		Prep Date: 6/13/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.65 0.49 1.969 0 83.8 75-125 1.494 9.89 20

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406590
Project: Caerus Parachute Creek 1 PBV Removal 6.11.14

QC BATCH REPORT

Batch ID: **R142577** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R142577				Units: % of sample		Analysis Date: 6/12/2014 04:03 PM		
Client ID:		Run ID: MOIST_140612D				SeqNo: 2807066		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-R142577				Units: % of sample		Analysis Date: 6/12/2014 04:03 PM		
Client ID:		Run ID: MOIST_140612D				SeqNo: 2807065		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1406580-01A DUP				Units: % of sample		Analysis Date: 6/12/2014 04:03 PM		
Client ID:		Run ID: MOIST_140612D				SeqNo: 2807052		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 56.79 0.050 0 0 0 0-0 55.35 2.57 20

DUP		Sample ID: 1406617-01A DUP				Units: % of sample		Analysis Date: 6/12/2014 04:03 PM		
Client ID:		Run ID: MOIST_140612D				SeqNo: 2807064		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 15.67 0.050 0 0 0 0-0 15.26 2.65 20

The following samples were analyzed in this batch:

1406590-01B	1406590-02B	1406590-03B
1406590-04B	1406590-05B	

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

Chain-of-Custody

WORKORDER

1406590


Forma 202r

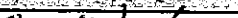




PAGE	1	of	1
DISPOSAL	By Lab or	Return to Client	

PROJECT NAME		SAMPLER		DATE		PAGE	
PROJECT No.		SITE ID		TURNAROUND		DISPOSAL	
COMPANY NAME		BILL TO COMPANY		INVOICE ATTN TO		ADDRESS	
CITY / STATE / ZIP		CITY / STATE / ZIP		PHONE		FAX	
E-MAIL		E-MAIL		DRO		GRO	
Matrix		Sample Date		Sample Time		# Bottles	
Pres.		QC		TOTAL METALS - TABLE 910-1		SEMI VOLTS - PAH	
SAR		EC		PH			
1	NORTH WALL, 6'	SOIL	6-11-14	1255	3	8	
2	SOUTH WALL, 7'		6-10-14	1353	3	8	
3	EAST WALL, 6.5'		6-11-14	1050	3	8	
4	WEST WALL, 7'		6-10-14	1356	3	8	
5	FOOTPRINT, 12'		6-11-14	1422	3	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: <div style="text-align: center;">4.2°</div> 	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-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-NaHCO ₃ 7-Other 8-4 degrees C 9-5035				

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Casey Richardson	6-11-14	1535
RECEIVED BY		H. J. M.	6-11-14	1536
RELINQUISHED BY		H. J. M.	6-11-14	1540
RECEIVED BY		K. W. IERENIA	6/12/14	0930
RELINQUISHED BY		K. W. IERENIA	6/12/14	0930
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 11-Jun-14 15:40

Work Order: 1406590

Received by: KRW

Checklist completed by Keith Wurenga
eSignature

12-Jun-14
Date

Reviewed by: Chad Whelton
eSignature

12-Jun-14
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"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.2 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/12/2014 11:37:36 AM</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

From: (978) 285-5783
 Nick Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RLA



Ship Date: 11 JUN 14
 Actual: 75.0 LB
 CAD: 2284840/NET3480

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



SHIP TO: (916) 399-8878
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL NUMBER

Ref # 081114-1
 Invoice #
 PO # Parachute
 Dept #

HOLLAND, MI 49424

THU - 12 JUN 10:30A
 PRIORITY OVERNIGHT

TRK# 7702 7520 3480
 E281

49424
 MS-US
 GRR

XX GRRA

E281CAP720

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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.

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08-Jul-2014

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

Re: **Caerus Parachute Creek 1 Background 6.27.14**

Work Order: **14061537**

Dear Mark,

ALS Environmental received 3 samples on 28-Jun-2014 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 16.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Joseph Ribar

Ann Preston
Project Manager



Certificate No: MN 532786

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: Caerus Parachute Creek 1 Background 6.27.14
Work Order: 14061537

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>
14061537-01	BKGD 01	Soil		6/27/2014 13:05	6/28/2014 10:00	<input type="checkbox"/>
14061537-02	BKGD 02	Soil		6/27/2014 13:08	6/28/2014 10:00	<input type="checkbox"/>
14061537-03	BKGD 03	Soil		6/27/2014 13:11	6/28/2014 10:00	<input type="checkbox"/>

ALS Group USA, Corp

Date: 08-Jul-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 Background 6.27.14
Sample ID: BKGD 01
Collection Date: 6/27/2014 01:05 PM

Work Order: 14061537
Lab ID: 14061537-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 7/1/14	Analyst: ML
Arsenic	8.5		1.7	mg/Kg-dry	5	7/2/2014 02:41 AM
MOISTURE			A2540 G			Analyst: TM
Moisture	2.7		0.050	% of sample	1	7/1/2014 03:06 PM

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

ALS Group USA, Corp**Date:** 08-Jul-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 Background 6.27.14
Sample ID: BKGD 02
Collection Date: 6/27/2014 01:08 PM

Work Order: 14061537
Lab ID: 14061537-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 7/1/14	Analyst: ML
Arsenic	8.0		2.1	mg/Kg-dry	5	7/2/2014 03:07 AM
MOISTURE			A2540 G			Analyst: TM
Moisture	2.7		0.050	% of sample	1	7/1/2014 03:06 PM

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

ALS Group USA, Corp

Date: 08-Jul-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 Background 6.27.14
Sample ID: BKGD 03
Collection Date: 6/27/2014 01:11 PM

Work Order: 14061537
Lab ID: 14061537-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 7/2/14	Analyst: ML
Arsenic	8.4		1.8	mg/Kg-dry	5	7/2/2014 07:59 PM
SOLUBLE CATIONS FOR SAR			SW6020A		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Calcium	170		10	mg/L	20	7/2/2014 06:58 PM
Magnesium	24		4.0	mg/L	20	7/2/2014 06:58 PM
Sodium	18		4.0	mg/L	20	7/2/2014 06:58 PM
SODIUM ADSORPTION RATIO			USDA H60 METHO		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Sodium Adsorption Ratio	0.34		0.010	none	1	7/2/2014
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep: USDA Method 20B / 7/2/14	Analyst: JB
Electrical Conductivity @ Saturation	1.4		0.050	mmhos/cm @25	10	7/2/2014 05:00 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	2.9		0.050	% of sample	1	7/1/2014 02:00 PM
PH			SW9045D		Prep: EXTRACT / 7/2/14	Analyst: AT
pH	8.0			s.u.	1	7/2/2014 04:19 PM

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

<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

<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: 08-Jul-14

Client: HRL Compliance Solutions, Inc

Work Order: 14061537

Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **60187**

Instrument ID **ICPMS1**

Method: **SW6020A**

DUP		Sample ID: 14061529-01CDUP				Units: mg/L		Analysis Date: 7/2/2014 06:46 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834621		Prep Date: 7/2/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	222.6	10	0	0	0	0-0	253.8	13.1		
Magnesium	97.06	4.0	0	0	0	0-0	111.2	13.6		
Sodium	333.2	4.0	0	0	0	0-0	377.8	12.5		

DUP		Sample ID: 14061529-01CDUP				Units: none		Analysis Date: 7/2/2014		
Client ID:		Run ID: SAR_140702A				SeqNo: 2837120		Prep Date: 7/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	4.691	0.010	0	0	0		4.976	5.9	50	

The following samples were analyzed in this batch:

14061537-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **60213** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60213-60213				Units: mg/Kg		Analysis Date: 7/2/2014 01:57 AM		
Client ID:		Run ID: ICPMS1_140701A				SeqNo: 2832165		Prep Date: 7/1/2014		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-60213-60213					Units: mg/Kg		Analysis Date: 7/2/2014 02:03 AM		
Client ID:			Run ID: ICPMS1_140701A			SeqNo: 2832167		Prep Date: 7/1/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Arsenic 4.898 0.25 5 0 98 80-120 0

MS		Sample ID: 1407017-02AMS				Units: mg/Kg		Analysis Date: 7/2/2014 04:54 AM		
Client ID:		Run ID: ICPMS1_140701A			SeqNo: 2832234		Prep Date: 7/1/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic 9.605 1.7 6.812 5.188 64.8 75-125 0 S

MSD		Sample ID: 1407017-02AMSD				Units: mg/Kg		Analysis Date: 7/2/2014 05:01 AM		
Client ID:		Run ID: ICPMS1_140701A			SeqNo: 2832238		Prep Date: 7/1/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic 9.441 1.7 6.775 5.188 62.8 75-125 9.605 1.72 25 S

The following samples were analyzed in this batch:

14061537-01A	14061537-02A
--------------	--------------

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **60265** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60265-60265				Units: mg/Kg		Analysis Date: 7/2/2014 07:47 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834738		Prep Date: 7/2/2014		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-60265-60265				Units: mg/Kg		Analysis Date: 7/2/2014 07:53 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834739		Prep Date: 7/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic 4.714 0.25 5 0 94.3 80-120 0

MS		Sample ID: 1407049-01BMS				Units: mg/Kg		Analysis Date: 7/2/2014 08:17 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834743		Prep Date: 7/2/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic 9.922 1.9 7.452 4.338 74.9 75-125 0 S

MSD		Sample ID: 1407049-01BMSD				Units: mg/Kg		Analysis Date: 7/2/2014 08:23 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834744		Prep Date: 7/2/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic 12.15 1.9 7.44 4.338 105 75-125 9.922 20.2 25

The following samples were analyzed in this batch:

14061537-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **60187** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14061529-01C DUP				Units: mmhos/cm @25°		Analysis Date: 7/2/2014 05:00 PM		
Client ID:		Run ID: WETCHEM_140702T				SeqNo: 2834078		Prep Date: 7/2/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4	0.050	0	0	0		4.39	9.3	50	

The following samples were analyzed in this batch:

14061537-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **60262** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-60262-60262				Units: s.u.		Analysis Date: 7/2/2014 04:19 PM		
Client ID:		Run ID: WETCHEM_140702J				SeqNo: 2833896		Prep Date: 7/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 3.99 0 4 0 99.8 90-110 0

DUP				Sample ID: 14061537-03A DUP				Units: s.u.			Analysis Date: 7/2/2014 04:19 PM			
Client ID: BKGD 03				Run ID: WETCHEM_140702J				SeqNo: 2833902			Prep Date: 7/2/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

pH 8.03 0 0 0 0 0-0 8.05 0.249 20

DUP		Sample ID: 1407016-02B DUP					Units: s.u.		Analysis Date: 7/2/2014 04:19 PM		
Client ID:			Run ID: WETCHEM_140702J			SeqNo: 2833909		Prep Date: 7/2/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 8.47 0 0 0 0 0-0 8.48 0.118 20

The following samples were analyzed in this batch:

14061537-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **R143746** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R143746					Units: % of sample		Analysis Date: 7/1/2014 02:00 PM		
Client ID:			Run ID: MOIST_140701A			SeqNo: 2833419		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-R143746					Units: % of sample		Analysis Date: 7/1/2014 02:00 PM		
Client ID:			Run ID: MOIST_140701A			SeqNo: 2833418		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1407034-01A DUP					Units: % of sample		Analysis Date: 7/1/2014 02:00 PM		
Client ID:			Run ID: MOIST_140701A			SeqNo: 2833406		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 31.45 0.050 0 0 0 0-0 31.58 0.413 20

DUP		Sample ID: 1407047-01A DUP				Units: % of sample		Analysis Date: 7/1/2014 02:00 PM		
Client ID:		Run ID: MOIST_140701A			SeqNo: 2833408		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 25.3 0.050 0 0 0 0-0 28.23 10.9 20

The following samples were analyzed in this batch:

14061537-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061537
Project: Caerus Parachute Creek 1 Background 6.27.14

QC BATCH REPORT

Batch ID: **R143748** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R143748				Units: % of sample		Analysis Date: 7/1/2014 03:06 PM		
Client ID:		Run ID: MOIST_140701B				SeqNo: 2833445		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-R143748				Units: % of sample		Analysis Date: 7/1/2014 03:06 PM		
Client ID:		Run ID: MOIST_140701B				SeqNo: 2833444		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1407014-01B DUP					Units: % of sample		Analysis Date: 7/1/2014 03:06 PM		
Client ID:			Run ID: MOIST_140701B			SeqNo: 2833435		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 9.92 0.050 0 0 0 0-0 11.26 12.7 20

DUP		Sample ID: 1407017-02A DUP				Units: % of sample		Analysis Date: 7/1/2014 03:06 PM		
Client ID:		Run ID: MOIST_140701B			SeqNo: 2833443		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 0.42 0.050 0 0 0 0-0 0.43 2.35 20

The following samples were analyzed in this batch:

14061537-01A	14061537-02A
--------------	--------------

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



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424
TF: (800) 443-1511 PH: (616) 399-6070 FX: (616) 399-6185

Chain-of-Custody

Form 202r8

WORKORDER #

14061537

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME CAERUS PARACHUTE CREEK
BACKGROUND

SAMPLER Casey Richardson

DATE 6-27-14

TURNAROUND STANDARD

EDD FORMAT

PURCHASE ORDER

COMPANY NAME HCSI

BILL TO COMPANY Caerus Piceance LLC

SEND REPORT TO Casey Richardson/ Mark Mumby

INVOICE ATTN TO Ed Winters

ADDRESS 2385 F 1/2 Road

ADDRESS 120 Railroad Ave. Suite D

CITY/STATE/ZIP Grand Junction, CO. 81505

CITY/STATE/ZIP Parachute, CO 81635

PHONE 970-243-3271

PHONE 970-285-9606

FAX 970-243-3280

FAX

E-MAIL crichardson@hricomp.com

E-MAIL ewinters@caerusoilandgas.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

ARSENIC

SAR

EC

PH

1
2
3

BKGD 01

SOIL

6-27-14

1305

1

8

X

BKGD 02

1

1

1308

1

1

X

BKGD 03

1

1

1311

2

1

X

X

X

X

Time Zone (Circle): EST CST 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)

X LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + 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

Casey Richardson

6-27-14

1525

RECEIVED BY

RELINQUISHED BY

Casey Richardson

6-27

1525

RECEIVED BY

RELINQUISHED BY

Diane F. Shaw

6-27

1525

RECEIVED BY

6/28/14

1000

From: (970) 285-5783 Nick Martinez ALS Environmental 127 E. 1st Street PARACHUTE, CO 81635	Origin ID: RLA FedEx EXPRESS 	Ship Date: 27 JUN 14 Actual Wt: 60.0 LB CAD: 2264840NET3480 Delivery Address Bar Code 	Dim: 24 X 15 X 15 IN Ref # 062714-1 Invoice # PO # Dept #
SHIP TO: (616) 399-6870 sample receiving ALS Laboratory Group 3352 128TH AVE HOLLAND, MI 49424	BILL SENDER 	TERMS 7704 5169 6272 X0 GRRA 	SATURDAY 12:00P PRIORITY OVERNIGHT 49424 NE US GRR

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.
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Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 28-Jun-14 10:00

Work Order: 14061537

Received by: DS

Checklist completed by Diane Shaw 30-Jun-14
eSignature Date

Reviewed by: Ann Preston 01-Jul-14
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"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/30/2014 8:43:05 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



29-Aug-2014

Casey Richardson
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **Caerus Parachute Creek 1 8.22.14**

Work Order: **14081235**

Dear Casey,

ALS Environmental received 1 sample on 23-Aug-2014 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 19.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: MN 532786

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: Caerus Parachute Creek 1 8.22.14
Work Order: 14081235

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>
14081235-01	5 Point Composite	Soil		8/22/2014 11:50	8/23/2014 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 8.22.14
Work Order: 14081235

Case Narrative

Batch 62012 LCS recovery for Methyl iodide was above control limits, but all samples in this quality control batch were non-detect for this compound. No data requires qualification. The MS/MSD data for Volatiles is not related to this project's samples. No data requires qualification.

Batch 62022 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 62019 MS/MSD data for Volatiles is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 8.22.14
WorkOrder: 14081235

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte 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

<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
°F	Degrees Fahrenheit
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
none	

ALS Group USA, Corp

Date: 29-Aug-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 8.22.14
Sample ID: 5 Point Composite
Collection Date: 8/22/2014 11:50 AM

Work Order: 14081235
Lab ID: 14081235-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 8/27/14	Analyst: IT
DRO (C10-C28)	100		4.7	mg/Kg-dry	1	8/27/2014 10:36 PM
Surr: 4-Terphenyl-d14	84.5		39-133	%REC	1	8/27/2014 10:36 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 8/25/14	Analyst: IT
GRO (C6-C10)	950		2.9	mg/Kg-dry	1	8/26/2014 02:05 PM
Surr: Toluene-d8	132		50-150	%REC	1	8/26/2014 02:05 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 8/25/14	Analyst: LR
Mercury	0.032		0.014	mg/Kg-dry	1	8/25/2014 04:20 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 8/25/14	Analyst: ML
Arsenic	8.3		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
Barium	240		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
Cadmium	ND		0.93	mg/Kg-dry	5	8/26/2014 03:02 AM
Chromium	11		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
Lead	15		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
Selenium	ND		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
Silver	ND		2.3	mg/Kg-dry	5	8/26/2014 03:02 AM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 8/25/14	Analyst: AK
1,1,1-Trichloroethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,1,2,2-Tetrachloroethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,1,2-Trichloroethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,1-Dichloroethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,1-Dichloroethene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,2-Dichloroethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
1,2-Dichloropropane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
2-Butanone	ND		230	µg/Kg-dry	1	8/29/2014 07:52 AM
2-Hexanone	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
4-Methyl-2-pentanone	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Acetone	ND		120	µg/Kg-dry	1	8/29/2014 07:52 AM
Benzene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Bromodichloromethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Bromoform	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Bromomethane	ND		87	µg/Kg-dry	1	8/29/2014 07:52 AM
Carbon disulfide	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Carbon tetrachloride	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Chlorobenzene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Chloroethane	ND		120	µg/Kg-dry	1	8/29/2014 07:52 AM
Chloroform	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Chloromethane	ND		120	µg/Kg-dry	1	8/29/2014 07:52 AM

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

ALS Group USA, Corp

Date: 29-Aug-14

Client: HRL Compliance Solutions, Inc
Project: Caerus Parachute Creek 1 8.22.14
Sample ID: 5 Point Composite
Collection Date: 8/22/2014 11:50 AM

Work Order: 14081235
Lab ID: 14081235-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
cis-1,2-Dichloroethene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
cis-1,3-Dichloropropene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Dibromochloromethane	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Ethylbenzene	66		35	µg/Kg-dry	1	8/29/2014 07:52 AM
m,p-Xylene	1,200		69	µg/Kg-dry	1	8/29/2014 07:52 AM
Methyl iodide	ND		87	µg/Kg-dry	1	8/29/2014 07:52 AM
Methylene chloride	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
o-Xylene	54		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Styrene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Tetrachloroethene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Toluene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
trans-1,2-Dichloroethene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
trans-1,3-Dichloropropene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
trans-1,4-Dichloro-2-butene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Trichloroethene	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Vinyl acetate	ND		35	µg/Kg-dry	1	8/29/2014 07:52 AM
Xylenes, Total	1,200		100	µg/Kg-dry	1	8/29/2014 07:52 AM
Surr: 1,2-Dichloroethane-d4	82.3		70-130	%REC	1	8/29/2014 07:52 AM
Surr: 4-Bromofluorobenzene	103		70-130	%REC	1	8/29/2014 07:52 AM
Surr: Dibromofluoromethane	91.0		70-130	%REC	1	8/29/2014 07:52 AM
Surr: Toluene-d8	103		70-130	%REC	1	8/29/2014 07:52 AM
FLASHPOINT, OPEN-CUP			D92			Analyst: RLF
Flashpoint, Open-cup	>200			°F	1	8/29/2014 08:15 AM
PAINT FILTER (FREE LIQUIDS)			SW9095			Analyst: KF
Free Liquids	Pass			none	1	8/25/2014 12:14 PM
MOISTURE			A2540 G			Analyst: RDM
Moisture	13		0.050	% of sample	1	8/27/2014 12:30 PM

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62100** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-62100-62100				Units: mg/Kg		Analysis Date: 8/27/2014 08:04 PM		
Client ID:		Run ID: GC8_140827A				SeqNo: 2907978		Prep Date: 8/27/2014		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	1.949	0	2	0	97.4	39-133	0			

LCS		Sample ID: DLCSS1-62100-62100				Units: mg/Kg		Analysis Date: 8/27/2014 08:35 PM		
Client ID:		Run ID: GC8_140827A				SeqNo: 2907979		Prep Date: 8/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	212.2	5.0	200	0	106	61-109	0			
Surr: 4-Terphenyl-d14	1.974	0	2	0	98.7	39-133	0			

MS		Sample ID: 14081279-03C MS				Units: mg/Kg		Analysis Date: 8/27/2014 09:05 PM		
Client ID:		Run ID: GC8_140827A				SeqNo: 2907980		Prep Date: 8/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	361.2	8.1	323.9	25.19	104	48-110	0			
Surr: 4-Terphenyl-d14	2.963	0	3.239	0	91.5	39-133	0			

MSD		Sample ID: 14081279-03C MSD				Units: mg/Kg		Analysis Date: 8/27/2014 09:35 PM		
Client ID:		Run ID: GC8_140827A				SeqNo: 2907981		Prep Date: 8/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	338.7	8.3	332.6	25.19	94.3	48-110	361.2	6.43	30	
Surr: 4-Terphenyl-d14	2.797	0	3.326	0	84.1	39-133	2.963	5.73	30	

The following samples were analyzed in this batch: | 14081235-01B |

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62019** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-62019-62019				Units: µg/Kg		Analysis Date: 8/26/2014 03:16 AM		
Client ID:		Run ID: GC9_140825A				SeqNo: 2903941		Prep Date: 8/25/2014		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								
<i>Surr: Toluene-d8</i>	4942	0	5000	0	98.8	50-150	0			

LCS		Sample ID: LCS-62019-62019				Units: µg/Kg		Analysis Date: 8/26/2014 02:51 AM		
Client ID:		Run ID: GC9_140825A				SeqNo: 2903940		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	499700	2,500	500000	0	99.9	70-130	0			
<i>Surr: Toluene-d8</i>	4361	0	5000	0	87.2	50-150	0			

MS		Sample ID: 14081253-01A MS				Units: µg/Kg		Analysis Date: 8/26/2014 04:06 AM		
Client ID:		Run ID: GC9_140825A				SeqNo: 2903943		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	491700	2,500	500000	0	98.3	70-130	0			
<i>Surr: Toluene-d8</i>	4208	0	5000	0	84.2	50-150	0			

MSD		Sample ID: 14081253-01A MSD				Units: µg/Kg		Analysis Date: 8/26/2014 04:31 AM		
Client ID:		Run ID: GC9_140825A				SeqNo: 2903944		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	478100	2,500	500000	0	95.6	70-130	491700	2.81	30	
<i>Surr: Toluene-d8</i>	5714	0	5000	0	114	50-150	4208	30.3	30	R

The following samples were analyzed in this batch: 14081235-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **61979** Instrument ID **HG1** Method: **SW7471**

MBLK				Sample ID: MBLK-61979-61979				Units: mg/Kg			Analysis Date: 8/25/2014 03:10 PM												
Client ID:				Run ID: HG1_140825A				SeqNo: 2902477			Prep Date: 8/25/2014		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-61979-61979				Units:mg/Kg		Analysis Date: 8/25/2014 03:12 PM		
Client ID:		Run ID: HG1_140825A			SeqNo:2902478		Prep Date: 8/25/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.19 0.020 0.1665 0 114 80-120 0

MS		Sample ID: 14081065-04BMS				Units:mg/Kg		Analysis Date: 8/25/2014 03:37 PM		
Client ID:		Run ID: HG1_140825A		SeqNo:2902511		Prep Date: 8/25/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1347 0.012 0.1028 0.0167 115 75-125 0

MSD				Sample ID: 14081065-04BMSD				Units:mg/Kg			Analysis Date: 8/25/2014 03:39 PM		
Client ID:				Run ID: HG1_140825A				SeqNo:2902512		Prep Date: 8/25/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.1306 0.012 0.1034 0.0167 110 75-125 0.1347 3.11 35

The following samples were analyzed in this batch:

14081235-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62022** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-62022-62022				Units: mg/Kg		Analysis Date: 8/25/2014 11:58 PM		
Client ID:		Run ID: ICPMS1_140825A				SeqNo: 2903708		Prep Date: 8/25/2014		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	0.001274	0.10								J
Chromium	ND	0.25								
Lead	0.00304	0.25								J
Selenium	ND	0.25								
Silver	ND	0.25								

LCS		Sample ID: LCS-62022-62022				Units: mg/Kg		Analysis Date: 8/26/2014 12:04 AM		
Client ID:		Run ID: ICPMS1_140825A				SeqNo: 2903710		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.462	0.25	5	0	89.2	80-120	0			
Barium	4.7	0.25	5	0	94	80-120	0			
Cadmium	4.64	0.10	5	0	92.8	80-120	0			
Chromium	4.607	0.25	5	0	92.1	80-120	0			
Lead	4.642	0.25	5	0	92.8	80-120	0			
Selenium	4.45	0.25	5	0	89	80-120	0			
Silver	4.683	0.25	5	0	93.7	80-120	0			

MS		Sample ID: 14081234-01AMS				Units: mg/Kg		Analysis Date: 8/26/2014 02:44 AM		
Client ID:		Run ID: ICPMS1_140825A				SeqNo: 2903752		Prep Date: 8/25/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	18.3	1.8	7.342	10.62	105	75-125	0			
Barium	214.8	1.8	7.342	219.2	-59.5	75-125	0			SO
Cadmium	7.919	0.73	7.342	0.6688	98.7	75-125	0			
Chromium	18.01	1.8	7.342	7.995	136	75-125	0			S
Lead	21	1.8	7.342	12.88	111	75-125	0			
Selenium	8.341	1.8	7.342	2.195	83.7	75-125	0			
Silver	6.832	1.8	7.342	0.08948	91.8	75-125	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62022** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 14081234-01AMSD				Units: mg/Kg		Analysis Date: 8/26/2014 02:50 AM		
Client ID:		Run ID: ICPMS1_140825A				SeqNo: 2903753		Prep Date: 8/25/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.48	1.8	7.267	10.62	136	75-125	18.3	11.2	25	S
Barium	170.2	1.8	7.267	219.2	-675	75-125	214.8	23.2	25	SO
Cadmium	7.307	0.73	7.267	0.6688	91.3	75-125	7.919	8.03	25	
Chromium	16.69	1.8	7.267	7.995	120	75-125	18.01	7.63	25	
Lead	20.61	1.8	7.267	12.88	106	75-125	21	1.87	25	
Selenium	8.114	1.8	7.267	2.195	81.5	75-125	8.341	2.75	25	
Silver	6.421	1.8	7.267	0.08948	87.1	75-125	6.832	6.2	25	

The following samples were analyzed in this batch:

14081235-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62012** Instrument ID **VMS9** Method: **SW8260B**

MBLK		Sample ID: MBLK-62012-62012				Units: µg/Kg		Analysis Date: 8/26/2014 01:04 AM		
Client ID:		Run ID: VMS9_140825A				SeqNo: 2903982		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	30								
1,1,2,2-Tetrachloroethane	ND	30								
1,1,2-Trichloroethane	ND	30								
1,1-Dichloroethane	ND	30								
1,1-Dichloroethene	ND	30								
1,2-Dichloroethane	ND	30								
1,2-Dichloropropane	ND	30								
2-Butanone	ND	200								
2-Hexanone	ND	30								
4-Methyl-2-pentanone	ND	30								
Acetone	ND	100								
Benzene	ND	30								
Bromodichloromethane	ND	30								
Bromoform	ND	30								
Bromomethane	ND	75								
Carbon disulfide	ND	30								
Carbon tetrachloride	ND	30								
Chlorobenzene	ND	30								
Chloroethane	ND	100								
Chloroform	ND	30								
Chloromethane	ND	100								
cis-1,2-Dichloroethene	ND	30								
cis-1,3-Dichloropropene	ND	30								
Dibromochloromethane	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
Methyl iodide	ND	75								
Methylene chloride	ND	30								
o-Xylene	ND	30								
Styrene	ND	30								
Tetrachloroethene	ND	30								
Toluene	ND	30								
trans-1,2-Dichloroethene	ND	30								
trans-1,3-Dichloropropene	ND	30								
trans-1,4-Dichloro-2-butene	ND	30								
Trichloroethene	ND	30								
Vinyl acetate	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	975.5	0	1000	0	97.6	70-130	0			
Surr: 4-Bromofluorobenzene	979.5	0	1000	0	98	70-130	0			
Surr: Dibromofluoromethane	946	0	1000	0	94.6	70-130	0			
Surr: Toluene-d8	998.5	0	1000	0	99.8	70-130	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62012** Instrument ID **VMS9** Method: **SW8260B**

LCS		Sample ID: LCS-62012-62012				Units: µg/Kg		Analysis Date: 8/25/2014 10:37 PM		
Client ID:		Run ID: VMS9_140825A				SeqNo: 2903981		Prep Date: 8/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1014	30	1000	0	101	70-135	0			
1,1,2,2-Tetrachloroethane	993	30	1000	0	99.3	55-130	0			
1,1,2-Trichloroethane	979	30	1000	0	97.9	60-125	0			
1,1-Dichloroethane	1068	30	1000	0	107	75-125	0			
1,1-Dichloroethene	1002	30	1000	0	100	65-135	0			
1,2-Dichloroethane	1026	30	1000	0	103	70-135	0			
1,2-Dichloropropane	992.5	30	1000	0	99.2	70-120	0			
2-Butanone	1050	200	1000	0	105	30-160	0			
2-Hexanone	1006	30	1000	0	101	45-145	0			
4-Methyl-2-pentanone	1288	30	1000	0	129	96-168	0			
Acetone	945.5	100	1000	0	94.6	20-160	0			
Benzene	1055	30	1000	0	106	75-125	0			
Bromodichloromethane	990	30	1000	0	99	70-130	0			
Bromoform	917	30	1000	0	91.7	55-135	0			
Bromomethane	939.5	75	1000	0	94	30-160	0			
Carbon disulfide	1004	30	1000	0	100	45-160	0			
Carbon tetrachloride	936.5	30	1000	0	93.6	65-135	0			
Chlorobenzene	1062	30	1000	0	106	75-125	0			
Chloroethane	1032	100	1000	0	103	40-155	0			
Chloroform	1085	30	1000	0	108	70-125	0			
Chloromethane	726	100	1000	0	72.6	50-130	0			
cis-1,2-Dichloroethene	1106	30	1000	0	111	65-125	0			
cis-1,3-Dichloropropene	1042	30	1000	0	104	70-125	0			
Dibromochloromethane	860.5	30	1000	0	86	65-135	0			
Ethylbenzene	1064	30	1000	0	106	75-125	0			
m,p-Xylene	2124	60	2000	0	106	80-125	0			
Methyl iodide	2078	75	1000	0	208	64-145	0			S
Methylene chloride	1011	30	1000	0	101	55-145	0			
o-Xylene	1060	30	1000	0	106	75-125	0			
Styrene	1070	30	1000	0	107	75-125	0			
Tetrachloroethene	1105	30	1000	0	110	64-140	0			
Toluene	1061	30	1000	0	106	70-125	0			
trans-1,2-Dichloroethene	1060	30	1000	0	106	65-135	0			
trans-1,3-Dichloropropene	1030	30	1000	0	103	65-125	0			
trans-1,4-Dichloro-2-butene	761.5	30	1000	0	76.2	62-112	0			
Trichloroethene	1002	30	1000	0	100	75-125	0			
Xylenes, Total	3184	90	3000	0	106	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1013</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>1006</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>1006</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>1010</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62012** Instrument ID **VMS9** Method: **SW8260B**

MS				Sample ID: 14081228-05A MS			Units: µg/Kg		Analysis Date: 8/25/2014 08:38 PM	
Client ID:				Run ID: VMS6_140825A			SeqNo: 2903427		Prep Date: 8/25/2014	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	894	30	1000	0	89.4	70-135	0			
1,1,2,2-Tetrachloroethane	1084	30	1000	0	108	55-130	0			
1,1,2-Trichloroethane	1090	30	1000	0	109	60-125	0			
1,1-Dichloroethane	1096	30	1000	0	110	75-125	0			
1,1-Dichloroethene	824	30	1000	0	82.4	65-135	0			
1,2-Dichloroethane	1096	30	1000	0	110	70-135	0			
1,2-Dichloropropane	1094	30	1000	0	109	70-120	0			
2-Butanone	1340	200	1000	0	134	30-160	0			
2-Hexanone	1172	30	1000	0	117	45-145	0			
4-Methyl-2-pentanone	1472	30	1000	0	147	89-161	0			
Acetone	1569	100	1000	0	157	20-160	0			
Benzene	1054	30	1000	0	105	75-125	0			
Bromodichloromethane	1065	30	1000	0	106	70-130	0			
Bromoform	913.5	30	1000	0	91.4	55-135	0			
Bromomethane	683	75	1000	0	68.3	30-160	0			
Carbon disulfide	711.5	30	1000	0	71.2	45-160	0			
Carbon tetrachloride	742	30	1000	0	74.2	65-135	0			
Chlorobenzene	1074	30	1000	0	107	75-125	0			
Chloroethane	758.5	100	1000	0	75.8	40-155	0			
Chloroform	1169	30	1000	0	117	70-125	0			
Chloromethane	763	100	1000	0	76.3	50-130	0			
cis-1,2-Dichloroethene	1123	30	1000	0	112	65-125	0			
cis-1,3-Dichloropropene	1196	30	1000	0	120	70-125	0			
Dibromochloromethane	793.5	30	1000	0	79.4	65-135	0			
Ethylbenzene	1062	30	1000	0	106	75-125	0			
m,p-Xylene	2118	60	2000	0	106	80-125	0			
Methyl iodide	838.5	75	1000	0	83.8	30-105	0			
Methylene chloride	1146	30	1000	0	115	55-145	0			
o-Xylene	1079	30	1000	0	108	75-125	0			
Styrene	1086	30	1000	0	109	75-125	0			
Tetrachloroethene	982.5	30	1000	0	98.2	64-140	0			
Toluene	1036	30	1000	0	104	70-125	0			
trans-1,2-Dichloroethene	1033	30	1000	0	103	65-135	0			
trans-1,3-Dichloropropene	1002	30	1000	0	100	65-125	0			
trans-1,4-Dichloro-2-butene	1536	30	1000	0	154	45-86	0			S
Trichloroethene	1020	30	1000	0	102	75-125	0			
Xylenes, Total	3196	90	3000	0	107	75-125	0			
Surr: 1,2-Dichloroethane-d4	983	0	1000	0	98.3	70-130	0			
Surr: 4-Bromofluorobenzene	1014	0	1000	0	101	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			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **62012** Instrument ID **VMS9** Method: **SW8260B**

MSD				Sample ID: 14081228-05A MSD			Units: µg/Kg		Analysis Date: 8/25/2014 09:04 PM	
Client ID:				Run ID: VMS6_140825A			SeqNo: 2903430		Prep Date: 8/25/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	833	30	1000	0	83.3	70-135	894	7.06	30	
1,1,2,2-Tetrachloroethane	1010	30	1000	0	101	55-130	1084	7.11	30	
1,1,2-Trichloroethane	1034	30	1000	0	103	60-125	1090	5.28	30	
1,1-Dichloroethane	1042	30	1000	0	104	75-125	1096	5	30	
1,1-Dichloroethene	763	30	1000	0	76.3	65-135	824	7.69	30	
1,2-Dichloroethane	1072	30	1000	0	107	70-135	1096	2.31	30	
1,2-Dichloropropane	1062	30	1000	0	106	70-120	1094	2.92	30	
2-Butanone	1240	200	1000	0	124	30-160	1340	7.67	30	
2-Hexanone	1072	30	1000	0	107	45-145	1172	8.87	30	
4-Methyl-2-pentanone	1351	30	1000	0	135	89-161	1472	8.54	30	
Acetone	1404	100	1000	0	140	20-160	1569	11.1	30	
Benzene	994.5	30	1000	0	99.4	75-125	1054	5.76	30	
Bromodichloromethane	1032	30	1000	0	103	70-130	1065	3.2	30	
Bromoform	832	30	1000	0	83.2	55-135	913.5	9.34	30	
Bromomethane	637.5	75	1000	0	63.8	30-160	683	6.89	30	
Carbon disulfide	636.5	30	1000	0	63.6	45-160	711.5	11.1	30	
Carbon tetrachloride	712.5	30	1000	0	71.2	65-135	742	4.06	30	
Chlorobenzene	1030	30	1000	0	103	75-125	1074	4.14	30	
Chloroethane	687.5	100	1000	0	68.8	40-155	758.5	9.82	30	
Chloroform	1115	30	1000	0	112	70-125	1169	4.73	30	
Chloromethane	713	100	1000	0	71.3	50-130	763	6.78	30	
cis-1,2-Dichloroethene	1064	30	1000	0	106	65-125	1123	5.35	30	
cis-1,3-Dichloropropene	1145	30	1000	0	114	70-125	1196	4.32	30	
Dibromochloromethane	768	30	1000	0	76.8	65-135	793.5	3.27	30	
Ethylbenzene	1013	30	1000	0	101	75-125	1062	4.72	30	
m,p-Xylene	2042	60	2000	0	102	80-125	2118	3.61	30	
Methyl iodide	819.5	75	1000	0	82	30-105	838.5	2.29	30	
Methylene chloride	1071	30	1000	0	107	55-145	1146	6.72	30	
o-Xylene	1043	30	1000	0	104	75-125	1079	3.39	30	
Styrene	1069	30	1000	0	107	75-125	1086	1.58	30	
Tetrachloroethene	942.5	30	1000	0	94.2	64-140	982.5	4.16	30	
Toluene	990	30	1000	0	99	70-125	1036	4.49	30	
trans-1,2-Dichloroethene	955.5	30	1000	0	95.6	65-135	1033	7.79	30	
trans-1,3-Dichloropropene	980	30	1000	0	98	65-125	1002	2.22	30	
trans-1,4-Dichloro-2-butene	1394	30	1000	0	139	45-86	1536	9.73	30	S
Trichloroethene	960	30	1000	0	96	75-125	1020	6.06	30	
Xylenes, Total	3086	90	3000	0	103	75-125	3196	3.53	30	
Surr: 1,2-Dichloroethane-d4	957.5	0	1000	0	95.8	70-130	983	2.63	30	
Surr: 4-Bromofluorobenzene	1000	0	1000	0	100	70-130	1014	1.39	30	
Surr: Dibromofluoromethane	977.5	0	1000	0	97.8	70-130	993	1.57	30	
Surr: Toluene-d8	965	0	1000	0	96.5	70-130	972	0.723	30	

The following samples were analyzed in this batch:

14081235-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **R147139** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R147139				Units: % of sample		Analysis Date: 8/27/2014 12:30 PM		
Client ID:		Run ID: MOIST_140827A				SeqNo: 2907523		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-R147139				Units: % of sample		Analysis Date: 8/27/2014 12:30 PM		
Client ID:		Run ID: MOIST_140827A				SeqNo: 2907521		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: 14081269-02A DUP				Units: % of sample		Analysis Date: 8/27/2014 12:30 PM		
Client ID:		Run ID: MOIST_140827A				SeqNo: 2907492		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 62.59 0.050 0 0 0 0-0 59.52 5.03 20

DUP		Sample ID: 14081386-01A DUP				Units: % of sample		Analysis Date: 8/27/2014 12:30 PM		
Client ID:		Run ID: MOIST_140827A				SeqNo: 2907512		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.11 0.050 0 0 0 0-0 20.27 0.792 20

The following samples were analyzed in this batch:

14081235-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081235
Project: Caerus Parachute Creek 1 8.22.14

QC BATCH REPORT

Batch ID: **R147266** Instrument ID **WETCHEM** Method: **D92**

LCS					Sample ID: LCS-R147266-R147266					Units: °F			Analysis Date: 8/29/2014 08:15 AM		
Client ID:				Run ID: WETCHEM_140829D				SeqNo: 2910953			Prep Date:			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Flashpoint, Open-cup		80	0	81	0	98.8	97-103	0							

The following samples were analyzed in this batch:

14081235-01B

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



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424
TP: (800) 443-1511 PH: (616) 399-6070 FX: (616) 399-6185

Chain-of-Custody

Form 202r3

WORKORDER #

14081235

PAGE

1 of 1

DISPOSAL

by Lab or Return to Client

PROJECT NAME CAERUS PARACHUTE CREEK 1

SAMPLER Casey Richardson

DATE 8-22-14

SITE ID CONTAINMENT CELL

TURNAROUND 5 DAY

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME HCSI

BILL TO COMPANY Caerus Piceance LLC

SEND REPORT TO Casey Richardson

INVOICE ATTN TO Ed Winters

ADDRESS 2385 F 1/2 Road

ADDRESS 120 Railroad Ave. Suite D

CITY/STATE/ZIP Grand Junction, CO. 81505

CITY/STATE/ZIP Parachute, CO 81635

PHONE 970-243-3271

PHONE 970-285-9606

FAX 970-243-3280

FAX

E-MAIL crichardson@hrcorp.com

E-MAIL ewinters@caerusoilandgas.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

RCRA 8 Metals

Full List VOCs

DRO

GRO

PAH - See Comments

Ignitability

Paint Filter

BTEX

1 5 POINT COMPOSITE

S

8-22-14 1150

2

B

+

+

+

+

+

+

+

+

Time Zone (Circle): EST CST MT 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)

x LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms + raw data)

Run PAHs DRO/GRO are above 5000 mg/kg

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

Casey Richardson

8-22-14 1255

RECEIVED BY

W.M.

8-22-14 1256

RELINQUISHED BY

W.M.

8-22-14 1700

RECEIVED BY

Kerry Wierenga

8/23/14 1000

RELINQUISHED BY

RECEIVED BY

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **23-Aug-14 10:00**

Work Order: **14081235**

Received by: **KRW**

Checklist completed by Keith Wurenga 23-Aug-14
eSignature Date

Reviewed by: Ann Preston 25-Aug-14
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"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.4 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>8/23/2014 11:56:38 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



10-Jun-2015

Jake Janicek
Caerus Oil and Gas LLC
120 N. Railroad Ave. Suite D
Parachute, CO 81635

Re: **Parachute Creek 1 Landfarm**

Work Order: **1506160**

Dear Jake,

ALS Environmental received 1 sample on 03-Jun-2015 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.

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 20.

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

Sincerely,

A handwritten signature in black ink that reads "Les Arnold".

Electronically approved by: Les Arnold

Les Arnold
Senior Project Manager



Certificate No: MN 532786

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: Caerus Oil and Gas LLC
Project: Parachute Creek 1 Landfarm
Work Order: 1506160**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>
1506160-01	Parachute Creek 1 Landfarm	Soil		6/2/2015 10:12	6/3/2015 09:30	<input type="checkbox"/>

Client: Caerus Oil and Gas LLC
Project: Parachute Creek 1 Landfarm
WorkOrder: 1506160

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte 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
µg/Kg-dry	Micrograms per Kilogram Dry Weight
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

Client: Caerus Oil and Gas LLC
Project: Parachute Creek 1 Landfarm
Work Order: 1506160

Case Narrative

Samples for the above noted Work Order were received on 06/03/2015. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:

No deviations or anomalies were noted.

Extractable Organics:

No other deviations or anomalies were noted.

Metals:

Batch 71840, Method ICP_6010C_W, Sample 1506160-01B: The MS recovery was above the upper control limit for Chromium; however, the MSD and %RPD were in control. No qualification is required.

No other deviations or anomalies were noted.

Wet Chemistry:

No other deviations or anomalies were noted.

ALS Group USA, Corp

Date: 10-Jun-15

Client: Caerus Oil and Gas LLC
Project: Parachute Creek 1 Landfarm
Sample ID: Parachute Creek 1 Landfarm
Collection Date: 6/2/2015 10:12 AM

Work Order: 1506160
Lab ID: 1506160-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	39		SW8015M		Prep Date: 6/4/2015	Analyst: RM
			4.9	mg/Kg-dry	1	6/5/2015 06:25 PM
Surr: 4-Terphenyl-d14	50.9		39-133	%REC	1	6/5/2015 06:25 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015D		Prep Date: 6/6/2015	Analyst: IT
			3,000	µg/Kg-dry	1	6/9/2015 10:26 AM
Surr: Toluene-d8	111		50-150	%REC	1	6/9/2015 10:26 AM
METALS ANALYSIS BY ICP						
Chromium	11		SW846 6010C		Prep Date: 6/3/2015	Analyst: JEC
			0.41	mg/Kg-dry	1	6/4/2015 11:34 AM
Copper	19		0.83	mg/Kg-dry	1	6/4/2015 11:34 AM
Nickel	19		0.41	mg/Kg-dry	1	6/4/2015 11:34 AM
Zinc	78		0.83	mg/Kg-dry	1	6/4/2015 11:34 AM
SOLUBLE CATIONS FOR SAR						
Calcium	510		SW846 6010C		Prep Date: 6/5/2015	Analyst: JEC
			5.0	mg/L	10	6/7/2015 02:14 PM
Magnesium	160		2.0	mg/L	10	6/7/2015 02:14 PM
Sodium	720		2.0	mg/L	10	6/7/2015 02:14 PM
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.1		USDA H60 METHO		Prep Date: 6/5/2015	Analyst: JEC
			0.010	none	1	6/7/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
Acenaphthene	ND		SW846 8270D		Prep Date: 6/4/2015	Analyst: RS
			7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Anthracene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Benzo(a)anthracene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Chrysene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Fluoranthene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Naphthalene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Pyrene	ND		7.9	µg/Kg-dry	1	6/5/2015 03:50 AM
Surr: 2-Fluorobiphenyl	84.0		12-100	%REC	1	6/5/2015 03:50 AM
Surr: 4-Terphenyl-d14	113		25-137	%REC	1	6/5/2015 03:50 AM
Surr: Nitrobenzene-d5	77.2		37-107	%REC	1	6/5/2015 03:50 AM
ELECTRICAL CONDUCTIVITY (SAR)						
Electrical Conductivity @ Saturation	7.5		USDA H60 METHO		Prep Date: 6/5/2015	Analyst: JB
			0.050	mmhos/cm @2	10	6/7/2015 08:00 PM
CHROMIUM, TRIVALENT						
			CALCULATION			Analyst: JB

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

ALS Group USA, Corp**Date:** 10-Jun-15

Client: Caerus Oil and Gas LLC
Project: Parachute Creek 1 Landfarm
Sample ID: Parachute Creek 1 Landfarm
Collection Date: 6/2/2015 10:12 AM

Work Order: 1506160
Lab ID: 1506160-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chromium, Trivalent	11		0.60	mg/Kg-dry	1	6/9/2015 06:00 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 6/8/2015	Analyst: MB
Chromium, Hexavalent	ND		1.1	mg/Kg-dry	1	6/9/2015 04:00 PM
MOISTURE			E160.3M			Analyst: EVB
Moisture	17		0.050	% of sample	1	6/5/2015 12:25 PM
PH			SW9045D		Prep Date: 6/4/2015	Analyst: STP
pH	8.3			s.u.	1	6/4/2015 05:30 PM

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

ALS Group USA, Corp

Date: 10-Jun-15

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71867** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-71867-71867				Units: mg/Kg		Analysis Date: 6/5/2015 03:55 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310431		Prep Date: 6/4/2015		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								
<i>Surr: 4-Terphenyl-d14</i>	1.426	0	2	0	71.3	39-133	0			

LCS		Sample ID: DLCSS1-71867-71867				Units: mg/Kg		Analysis Date: 6/5/2015 04:25 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310432		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	156.5	5.0	200	0	78.2	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	1.138	0	2	0	56.9	39-133	0			

MS		Sample ID: 1506197-01A MS				Units: mg/Kg		Analysis Date: 6/5/2015 04:55 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310433		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	420.3	8.2	329.2	140.6	84.9	48-110	0			
<i>Surr: 4-Terphenyl-d14</i>	1.784	0	3.292	0	54.2	39-133	0			

MSD		Sample ID: 1506197-01A MSD				Units: mg/Kg		Analysis Date: 6/5/2015 05:25 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310434		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	432.3	8.0	321.1	140.6	90.8	48-110	420.3	2.82	30	
<i>Surr: 4-Terphenyl-d14</i>	1.633	0	3.211	0	50.9	39-133	1.784	8.81	30	

The following samples were analyzed in this batch: 1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71864** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: GBLKS1-71864-71864				Units: µg/Kg		Analysis Date: 6/7/2015 01:29 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310053		Prep Date: 6/6/2015		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	0	0	0	0	0			
Surr: Toluene-d8	4550	0	5000	0	91	50-150	0			

LCS		Sample ID: GLCSS1-71864-71864				Units: µg/Kg		Analysis Date: 6/7/2015 11:50 AM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310050		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	454300	2,500	500000	0	90.9	70-130	0			
Surr: Toluene-d8	5206	0	5000	0	104	50-150	0			

MS		Sample ID: 1506355-01A MS				Units: µg/Kg		Analysis Date: 6/7/2015 12:15 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310051		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	427300	2,500	500000	0	85.5	70-130	0			
Surr: Toluene-d8	5362	0	5000	0	107	50-150	0			

MSD		Sample ID: 1506355-01A MSD				Units: µg/Kg		Analysis Date: 6/7/2015 12:40 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310052		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	443000	2,500	500000	0	88.6	70-130	427300	3.62	30	
Surr: Toluene-d8	4654	0	5000	0	93.1	50-150	5362	14.1	30	

The following samples were analyzed in this batch: 1506160-01A

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71840** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-71840-71840				Units: mg/L		Analysis Date: 6/4/2015 11:18 AM		
Client ID:			Run ID: ICP2_150604A			SeqNo: 3306711		Prep Date: 6/3/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	0.04445	0.25								J
Copper	0.03703	0.50								J
Nickel	ND	0.25								
Zinc	ND	0.50								

LCS				Sample ID: LCS-71840-71840				Units: mg/L			Analysis Date: 6/4/2015 11:23 AM			
Client ID:				Run ID: ICP2_150604A				SeqNo: 3306713			Prep Date: 6/3/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Chromium	5.383	0.25	5	0	108	80-120	0							
Copper	5.289	0.50	5	0	106	80-120	0							
Nickel	5.078	0.25	5	0	102	80-120	0							
Zinc	5.146	0.50	5	0	103	80-120	0							

MS				Sample ID: 1506160-01BMS				Units: mg/Kg		Analysis Date: 6/4/2015 11:40 AM			
Client ID: Parachute Creek 1 Landfarm				Run ID: ICP2_150604A				SeqNo: 3306718		Prep Date: 6/3/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chromium	18.51	0.34	6.784	9.505	133	75-125	0			S			
Copper	22.67	0.68	6.784	15.39	107	75-125	0						
Nickel	21.75	0.34	6.784	16.01	84.6	75-125	0						
Zinc	74.33	0.68	6.784	65.13	135	75-125	0			SO			

MSD				Sample ID: 1506160-01BMSD				Units: mg/Kg		Analysis Date: 6/4/2015 11:45 AM			
Client ID: Parachute Creek 1 Landfarm				Run ID: ICP2_150604A				SeqNo: 3306720		Prep Date: 6/3/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chromium	17.49	0.34	6.859	9.505	116	75-125	18.51	5.64	20				
Copper	21.46	0.69	6.859	15.39	88.5	75-125	22.67	5.48	20				
Nickel	21.21	0.34	6.859	16.01	75.7	75-125	21.75	2.54	20				
Zinc	69.96	0.69	6.859	65.13	70.4	75-125	74.33	6.05	20	SO			

The following samples were analyzed in this batch:

1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71885** Instrument ID **ICP2** Method: **SW846 6010C**

DUP					Sample ID: 1506195-01BDUP			Units: mg/L		Analysis Date: 6/7/2015 02:26 PM		
Client ID:			Run ID: ICP2_150607A			SeqNo: 3310408		Prep Date: 6/5/2015		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Calcium	743.8	5.0	0	0	0	0-0	801.8	7.51				
Magnesium	180.5	2.0	0	0	0	0-0	197.8	9.14				
Sodium	354.9	2.0	0	0	0	0-0	388.4	9.01				

DUP				Sample ID: 1506195-01BDUP				Units: none			Analysis Date: 6/7/2015			
Client ID:				Run ID: SAR_150607A				SeqNo: 3310452			Prep Date: 6/5/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Sodium Adsorption Ratio	3.028	0.010	0	0	0		3.184	5.02	50					

The following samples were analyzed in this batch: | 1506160-01B |

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71866** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-71866-71866				Units: µg/Kg		Analysis Date: 6/4/2015 06:15 PM		
Client ID:		Run ID: SVMS5_150604A				SeqNo: 3308264		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	1290	0	1667	0	77.4	12-100	0			
Surr: 4-Terphenyl-d14	1772	0	1667	0	106	25-137	0			
Surr: Nitrobenzene-d5	1274	0	1667	0	76.4	37-107	0			

LCS		Sample ID: SLCSS1-71866-71866				Units: µg/Kg		Analysis Date: 6/4/2015 06:37 PM		
Client ID:		Run ID: SVMS5_150604A				SeqNo: 3308265		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	499	6.7	666.7	0	74.8	45-110	0			
Anthracene	605.3	6.7	666.7	0	90.8	55-105	0			
Benzo(a)anthracene	614.7	6.7	666.7	0	92.2	50-110	0			
Benzo(a)pyrene	610.7	6.7	666.7	0	91.6	50-110	0			
Benzo(b)fluoranthene	614.7	6.7	666.7	0	92.2	45-115	0			
Benzo(k)fluoranthene	589.3	6.7	666.7	0	88.4	45-115	0			
Chrysene	570.7	6.7	666.7	0	85.6	55-110	0			
Dibenzo(a,h)anthracene	578	6.7	666.7	0	86.7	40-125	0			
Fluoranthene	613	6.7	666.7	0	91.9	55-115	0			
Indeno(1,2,3-cd)pyrene	575.3	6.7	666.7	0	86.3	40-120	0			
Naphthalene	372.7	6.7	666.7	0	55.9	40-105	0			
Pyrene	579.7	6.7	666.7	0	86.9	45-125	0			
Surr: 2-Fluorobiphenyl	1307	0	1667	0	78.4	12-100	0			
Surr: 4-Terphenyl-d14	1775	0	1667	0	107	25-137	0			
Surr: Nitrobenzene-d5	1234	0	1667	0	74.1	37-107	0			

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71866** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1506197-01A MS			Units: µg/Kg		Analysis Date: 6/4/2015 08:05 PM	
Client ID:				Run ID: SVMS5_150604A			SeqNo: 3308266		Prep Date: 6/4/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	969.3	13	1265	0	76.6	45-110	0			
Anthracene	1119	13	1265	0	88.4	55-105	0			
Benzo(a)anthracene	1107	13	1265	0	87.5	50-110	0			
Benzo(a)pyrene	1101	13	1265	0	87	50-110	0			
Benzo(b)fluoranthene	1103	13	1265	0	87.2	45-115	0			
Benzo(k)fluoranthene	1063	13	1265	0	84	45-115	0			
Chrysene	1007	13	1265	0	79.5	55-110	0			
Dibenzo(a,h)anthracene	1022	13	1265	0	80.8	40-125	0			
Fluoranthene	1079	13	1265	0	85.2	55-115	0			
Indeno(1,2,3-cd)pyrene	1065	13	1265	0	84.2	40-120	0			
Naphthalene	489.1	13	1265	0	38.6	40-105	0			S
Pyrene	1052	13	1265	0	83.1	45-125	0			
Surr: 2-Fluorobiphenyl	2197	0	3163	0	69.4	12-100	0			
Surr: 4-Terphenyl-d14	3210	0	3163	0	101	25-137	0			
Surr: Nitrobenzene-d5	1538	0	3163	0	48.6	37-107	0			

MSD				Sample ID: 1506197-01A MSD			Units: µg/Kg		Analysis Date: 6/4/2015 08:28 PM	
Client ID:				Run ID: SVMS5_150604A			SeqNo: 3308267		Prep Date: 6/4/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	968	13	1268	0	76.3	45-110	969.3	0.131	30	
Anthracene	1215	13	1268	0	95.8	55-105	1119	8.17	30	
Benzo(a)anthracene	1184	13	1268	0	93.4	50-110	1107	6.72	30	
Benzo(a)pyrene	1190	13	1268	0	93.8	50-110	1101	7.71	30	
Benzo(b)fluoranthene	1179	13	1268	0	93	45-115	1103	6.63	30	
Benzo(k)fluoranthene	1118	13	1268	0	88.1	45-115	1063	5.02	30	
Chrysene	1085	13	1268	0	85.6	55-110	1007	7.52	30	
Dibenzo(a,h)anthracene	1096	13	1268	0	86.4	40-125	1022	6.95	30	
Fluoranthene	1190	13	1268	0	93.9	55-115	1079	9.85	30	
Indeno(1,2,3-cd)pyrene	1125	13	1268	0	88.7	40-120	1065	5.46	30	
Naphthalene	701.1	13	1268	0	55.3	40-105	489.1	35.6	30	R
Pyrene	1114	13	1268	0	87.9	45-125	1052	5.75	30	
Surr: 2-Fluorobiphenyl	2298	0	3170	0	72.5	12-100	2197	4.51	40	
Surr: 4-Terphenyl-d14	3426	0	3170	0	108	25-137	3210	6.53	40	
Surr: Nitrobenzene-d5	2219	0	3170	0	70	37-107	1538	36.2	40	

The following samples were analyzed in this batch: 1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71885** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1506195-01B DUP				Units: mmhos/cm @25°		Analysis Date: 6/7/2015 08:00 PM		
Client ID:		Run ID: WETCHEM_150607B			SeqNo: 3310063		Prep Date: 6/5/2015		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	7	0.050	0	0	0		7.58	7.96	50	

The following samples were analyzed in this batch:

1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **71888** Instrument ID **WETCHEM** Method: **SW9045D**

Sample ID: 1506195-01B DUP					Units: s.u.		Analysis Date: 6/4/2015 05:30 PM				
Client ID:			Run ID: WETCHEM_150604I			SeqNo: 3307102		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8.03	0	0	0	0	0-0	8.07	0.497	20		

DUP					Sample ID: 1506202-01A DUP					Units: s.u.			Analysis Date: 6/4/2015 05:30 PM		
Client ID:				Run ID: WETCHEM_150604I				SeqNo: 3307106			Prep Date: 6/4/2015			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		8.8	0	0	0	0	0-0	8.76	0.456	20					

The following samples were analyzed in this batch:

1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **72077** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-72077-72077				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313987		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS		Sample ID: LCS-72077-72077				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313986		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.44 1.0 5 0 88.8 80-120 0

MS		Sample ID: 1506202-01A MS				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313970		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.108 0.98 4.902 0.7129 89.7 75-125 0

MS		Sample ID: 1506202-01A MSI				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313972		Prep Date: 6/8/2015		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2377 100 2454 0.7129 96.8 75-125 0

MSD		Sample ID: 1506202-01A MSD				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313971		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.237 1.0 5.155 0.7129 87.8 75-125 5.108 2.5 20

The following samples were analyzed in this batch:

1506160-01B

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

Client: Caerus Oil and Gas LLC
Work Order: 1506160
Project: Parachute Creek 1 Landfarm

QC BATCH REPORT

Batch ID: **R164958** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R164958					Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A					SeqNo: 3310703		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-R164958				Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A			SeqNo: 3310702		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP				Sample ID: 1506194-01A DUP				Units: % of sample			Analysis Date: 6/5/2015 12:25 PM			
Client ID:				Run ID: MOIST_150605A				SeqNo: 3310684			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 15.22 0.050 0 0 0 15.15 0.461 20

DUP		Sample ID: 1506246-01A DUP				Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A			SeqNo: 3310698		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 5.4 0.050 0 0 0 5.6 3.64 20

The following samples were analyzed in this batch:

1506160-01B

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



☐ ALS Environmental
781 Industrial Cir, Ste 3
Traverse City, Michigan 49686
(Tel) 231.421.3204
(Cell) 231.944.3459

Chain of Custody Form

Page 1 of 1

☒ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

Customer Information			Project Information				Parameter/Method Request for Analysis												
Purchase Order		Project Name	NORTHEASTERN - Vienna		A	Specific Gravity													
Work Order		Project Number	Davis 1-19		B														
Company Name	Northeastern Exploration, Inc.	Bill To Company	Northeastern Exploration, Inc.		C														
Send Report To	Cheryl Klein	Invoice Attn	Cheryl Klein		D														
Address	1190 M 32	Address	1190 M 32		E														
City/State/Zip	Johannesburg, MI 49751	City/State/Zip	Johannesburg, MI 49751		F														
Phone	989-786-4346	Phone	989-786-4346		G														
Fax	989-786-1134	Fax	989-786-1134		H														
e-Mail Address	cherylk@northeasternexp.com	e-Mail Address	cherylk@northeasternexp.com		I														
					J														
No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	Davis 1-19 <u>June 2015</u>	<u>6-1-15</u>	<u>1400</u>	Water	-	1	X												
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time: (Check Box)				Other				Results Due Date:							
<u>Mike Yang</u>		<u>Fed Ex</u>		<input type="checkbox"/> 10 Wk Days <input checked="" type="checkbox"/> 5 Wk Days <input type="checkbox"/> 3 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour															
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:													
			<u>FED EX</u>			Color: <u>light</u> Odor: <u>NO</u>													
Relinquished by:	Date:	Time:	Received by (Laboratory):	Date:	Time:	ALS Cooler ID	Cooler Temp	QC Package: (Check Box Below)											
<u>FED EX</u>			<u>DFS</u>	<u>6/3/15</u>	<u>0945</u>		<u>5.8</u>	<input checked="" type="checkbox"/> Level II: Standard QC	<input type="checkbox"/> Level III: Raw Data										
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):					<input type="checkbox"/> TRRP LRC <input type="checkbox"/> TRRP Level IV											
<u>DFS</u>	<u>6/3/15</u>	<u>1100</u>						<input type="checkbox"/> Level IV: SW846 Methods/CLP like											
								<input type="checkbox"/> Other:											
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C																			

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

From: (866) 788-4346
CHERYL KLEN

Origin ID: GLRA



1190 M 32

JOHANNESBURG, MI 48751

SHIP TO: (231) 844-3459

BILL RECIPIENT

ALS
ALS ENVIRONMENTAL
3352 128TH AVE

HOLLAND, MI 49424

Ship Date: 02 JUN 15

Act Wgt: 8.0 LB

CAD: 103742530/NET3810

Dim: 12 X 12 X 14 IN

Delivery Address Bar Code



Ref # DAVIS 1-19

Invoice #

PO #

Dept #

WED - 03 JUN AA
STANDARD OVERNIGHT

TRK# 7737 2591 4513

0291

49424

MI-US

GRR

NA HLMA



537J1RA0EE48

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.

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Sample Receipt Checklist

Client Name: **CAERUS**

Date/Time Received: **03-Jun-15 09:30**

Work Order: **1506160**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

03-Jun-15
Date

Reviewed by: Tom Bramish
eSignature

03-Jun-15
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): 4.6 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 6/3/2015 11:49:04 AM

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: