

**Starkey 1 (Location ID 335383)  
Partially Buried Vault Release  
Spill/Release Point ID 448190  
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 Starkey 1 (Location ID 335383) pad location in the Caerus Piceance, LLC (Caerus) area of operations.

All impacted soil removed during the excavation project was landfarmed on location. On November 9, 2016 a composite soil sample (Starkey 1 Landfarm) was collected from the onsite landfarm and submitted for laboratory analysis of all COGCC Table 910-1 analytes. Analytical results indicate that the soil sample was in compliance with COGCC Table 910-1 Concentration Levels for all analytes or were within background concentrations, except for the electrical conductivity (EC) measurement. However, the soil that this sample was collected from was buried within the excavation created during this remediation project at a depth greater than three feet below the ground surface and the COGCC does not apply the Concentration Level for EC to soils deeper than three feet below the ground surface.

Background samples were collected from an undisturbed area near the Chevron 41-8D pad (COGCC Location ID 324198). Laboratory analytical reports are included as an attachment.

Based on removal of the PBV, soil analytical results, and the backfilling of the excavation, Caerus requests an NFA designation for this project. Caerus also requests that the COAs attached to the COGCC-approved Form 27 (COGCC Document ID 2527215) be waived since the landfarm did not require remediation and the associated Remediation Project (Remediation Project #9911) be closed.



18-Nov-2016

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

Re: **Starkey 1 Landfarm**

Work Order: **1611728**

Dear Jake,

ALS Environmental received 1 sample on 10-Nov-2016 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 industry accepted practices and Quality Control 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 23.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager



Certificate No: MN 998501

### Report of Laboratory Analysis

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

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**Client:** Caerus Oil and Gas LLC  
**Project:** Starkey 1 Landfarm  
**Work Order:** 1611728

**Work Order Sample Summary**

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<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>
1611728-01	Starkey 1 Landfarm	Soil		11/9/2016 11:26	11/10/2016 09:30	<input type="checkbox"/>

**Client:** Caerus Oil and Gas LLC  
**Project:** Starkey 1 Landfarm  
**WorkOrder:** 1611728

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
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
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 Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

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

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

Client: Caerus Oil and Gas LLC  
 Project: Starkey 1 Landfarm  
 Sample ID: Starkey 1 Landfarm  
 Collection Date: 11/9/2016 11:26 AM

Work Order: 1611728  
 Lab ID: 1611728-01  
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW3546 / 11/14/16	Analyst: <b>IT</b>
DRO (C10-C28)	320		5.7	mg/Kg-dry	1	11/15/2016 03:28 AM
Surr: 4-Terphenyl-d14	59.3		39-133	%REC	1	11/15/2016 03:28 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>			<b>SW8015D</b>		Prep: SW5035 / 11/14/16	Analyst: <b>IT</b>
GRO (C6-C10)	170		3.2	mg/Kg-dry	1	11/14/2016 04:36 PM
Surr: Toluene-d8	114		50-150	%REC	1	11/14/2016 04:36 PM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 / 11/16/16	Analyst: <b>LR</b>
Mercury	0.034		0.014	mg/Kg-dry	1	11/17/2016 12:26 AM
<b>METALS ANALYSIS BY ICP</b>			<b>SW846 6010C</b>		Prep: SW3050B / 11/14/16	Analyst: <b>RH</b>
Arsenic	8.2		0.42	mg/Kg-dry	1	11/15/2016 12:54 PM
Barium	190		0.42	mg/Kg-dry	1	11/15/2016 12:54 PM
Cadmium	ND		0.85	mg/Kg-dry	1	11/15/2016 12:54 PM
Chromium	9.0		0.42	mg/Kg-dry	1	11/15/2016 12:54 PM
Copper	17		0.85	mg/Kg-dry	1	11/15/2016 12:54 PM
Lead	11		0.42	mg/Kg-dry	1	11/15/2016 12:54 PM
Nickel	18		0.42	mg/Kg-dry	1	11/15/2016 04:08 PM
Selenium	ND		0.85	mg/Kg-dry	1	11/15/2016 12:54 PM
Silver	ND		0.42	mg/Kg-dry	1	11/15/2016 12:54 PM
Zinc	66		0.85	mg/Kg-dry	1	11/15/2016 12:54 PM
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW846 6010C</b>		Prep: USDA Method 20B / 11/16/16	Analyst: <b>RH</b>
Calcium	500		5.0	mg/L	10	11/16/2016 01:51 PM
Magnesium	250		2.0	mg/L	10	11/16/2016 01:51 PM
Sodium	220		2.0	mg/L	10	11/16/2016 01:51 PM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 11/16/16	Analyst: <b>RH</b>
Sodium Adsorption Ratio	2.0		0.010	none	1	11/16/2016
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW846 8270D</b>		Prep: SW3546 / 11/14/16	Analyst: <b>JF</b>
Acenaphthene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Anthracene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Benzo(a)anthracene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Benzo(a)pyrene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Benzo(b)fluoranthene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Benzo(k)fluoranthene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Chrysene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Dibenzo(a,h)anthracene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Fluoranthene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM

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

# ALS Group, USA

Date: 18-Nov-16

**Client:** Caerus Oil and Gas LLC  
**Project:** Starkey 1 Landfarm  
**Sample ID:** Starkey 1 Landfarm  
**Collection Date:** 11/9/2016 11:26 AM

**Work Order:** 1611728  
**Lab ID:** 1611728-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Indeno(1,2,3-cd)pyrene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Naphthalene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Pyrene	ND		0.0077	mg/Kg-dry	1	11/15/2016 12:26 PM
Surr: 2-Fluorobiphenyl	77.3		12-100	%REC	1	11/15/2016 12:26 PM
Surr: 4-Terphenyl-d14	81.1		25-137	%REC	1	11/15/2016 12:26 PM
Surr: Nitrobenzene-d5	56.8		37-107	%REC	1	11/15/2016 12:26 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>		Prep: SW5035 / 11/13/16	Analyst: <b>LSY</b>
Benzene	ND		0.039	mg/Kg-dry	1	11/16/2016 12:57 PM
<b>Ethylbenzene</b>	<b>0.15</b>		<b>0.039</b>	<b>mg/Kg-dry</b>	1	11/16/2016 12:57 PM
<b>m,p-Xylene</b>	<b>1.8</b>		<b>0.078</b>	<b>mg/Kg-dry</b>	1	11/16/2016 12:57 PM
<b>o-Xylene</b>	<b>0.41</b>		<b>0.039</b>	<b>mg/Kg-dry</b>	1	11/16/2016 12:57 PM
<b>Toluene</b>	<b>0.042</b>		<b>0.039</b>	<b>mg/Kg-dry</b>	1	11/16/2016 12:57 PM
<b>Xylenes, Total</b>	<b>2.3</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	11/16/2016 12:57 PM
Surr: 1,2-Dichloroethane-d4	95.4		70-130	%REC	1	11/16/2016 12:57 PM
Surr: 4-Bromofluorobenzene	115		70-130	%REC	1	11/16/2016 12:57 PM
Surr: Dibromofluoromethane	77.2		70-130	%REC	1	11/16/2016 12:57 PM
Surr: Toluene-d8	98.0		70-130	%REC	1	11/16/2016 12:57 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 11/16/16	Analyst: <b>JB</b>
<b>Electrical Conductivity @ Saturation</b>	<b>7.7</b>		<b>0.25</b>	<b>mmhos/cm @2</b>	50	11/17/2016 04:45 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>JB</b>
<b>Chromium, Trivalent</b>	<b>9.0</b>		<b>0.58</b>	<b>mg/Kg-dry</b>	1	11/16/2016 08:20 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep: SW3060A / 11/14/16	Analyst: <b>MB</b>
<b>Chromium, Hexavalent</b>	ND		1.1	mg/Kg-dry	1	11/15/2016 05:00 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>EDL</b>
<b>Moisture</b>	<b>13</b>		<b>0.050</b>	<b>% of sample</b>	1	11/10/2016 07:02 PM
<b>PH</b>			<b>SW9045D</b>		Prep: EXTRACT / 11/14/16	Analyst: <b>RZM</b>
<b>pH</b>	<b>7.7</b>			<b>s.u.</b>	1	11/14/2016 04:05 PM

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

**QC BATCH REPORT**

Batch ID: **94467** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: <b>DBLKS1-94467-94467</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/14/2016 06:08 PM</b>			
Client ID:		Run ID: <b>GC8_161114A</b>		SeqNo: <b>4153414</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>			
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>	2.017	0	3.33	0	60.6	39-133	0				

LCS		Sample ID: <b>DLCSS1-94467-94467</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/14/2016 06:37 PM</b>			
Client ID:		Run ID: <b>GC8_161114A</b>		SeqNo: <b>4153415</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	236.3	5.0	333	0	71	61-109	0				
<i>Surr: 4-Terphenyl-d14</i>	1.493	0	3.33	0	44.8	39-133	0				

MS		Sample ID: <b>1611679-03A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/14/2016 07:07 PM</b>			
Client ID:		Run ID: <b>GC8_161114A</b>		SeqNo: <b>4153416</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	778.9	4.9	326.7	364.3	127	48-110	0			S	
<i>Surr: 4-Terphenyl-d14</i>	1.913	0	3.267	0	58.6	39-133	0				

MSD		Sample ID: <b>1611679-03A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/14/2016 07:36 PM</b>			
Client ID:		Run ID: <b>GC8_161114A</b>		SeqNo: <b>4153417</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	793.8	4.9	329.5	364.3	130	48-110	778.9	1.9	30	S	
<i>Surr: 4-Terphenyl-d14</i>	2.136	0	3.295	0	64.8	39-133	1.913	11	30		

The following samples were analyzed in this batch: 1611728-01A

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94465 Instrument ID GC9 Method: SW8015D

MBLK		Sample ID: MBLK-94465-94465				Units: µg/Kg-dry		Analysis Date: 11/14/2016 02:06 PM		
Client ID:		Run ID: GC9_161114A		SeqNo: 4153485		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	4265	0	5000		0	85.3	50-150	0		

MBLK		Sample ID: MBLK-94465-94465				Units: µg/Kg-dry		Analysis Date: 11/15/2016 01:11 A		
Client ID:		Run ID: GC9_161114B		SeqNo: 4153536		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								

LCS		Sample ID: LCS-94465-94465				Units: µg/Kg-dry		Analysis Date: 11/14/2016 01:42 PM		
Client ID:		Run ID: GC9_161114A		SeqNo: 4153481		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	473500	2,500	500000		0	94.7	70-130	0		
<i>Surr: Toluene-d8</i>	5004	0	5000		0	100	50-150	0		

LCS		Sample ID: LCS-94465-94465				Units: µg/Kg-dry		Analysis Date: 11/15/2016 12:44 PM		
Client ID:		Run ID: GC9_161114B		SeqNo: 4153542		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	10090	2,500	10000		0	101	80-120	0		

LCSD		Sample ID: LCSD-94465-94465				Units: µg/Kg-dry		Analysis Date: 11/15/2016 03:22 A		
Client ID:		Run ID: GC9_161114B		SeqNo: 4153541		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	11560	2,500	10000		0	116	80-120	10090	13.6	20

MS		Sample ID: 1611395-02A MS				Units: µg/Kg-dry		Analysis Date: 11/14/2016 05:01 PM		
Client ID:		Run ID: GC9_161114A		SeqNo: 4153497		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	707000	3,500	690500		0	102	70-130	0		
<i>Surr: Toluene-d8</i>	7761	0	6905		0	112	50-150	0		

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94465**      Instrument ID **GC9**      Method: **SW8015D**

MSD		Sample ID: 1611395-02A MSD				Units: µg/Kg-dry		Analysis Date: 11/14/2016 05:26 PM		
Client ID:		Run ID: GC9_161114A		SeqNo: 4153499		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	757900	3,500	690500	0	110	70-130	707000	6.95	30	
<i>Surr: Toluene-d8</i>	<i>7439</i>	<i>0</i>	<i>6905</i>	<i>0</i>	<i>108</i>	<i>50-150</i>	<i>7761</i>	<i>4.23</i>	<i>30</i>	

**The following samples were analyzed in this batch:** 1611728-01A

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94677** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: <b>MBLK-94677-94677</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/16/2016 11:25 PM</b>		
Client ID:		Run ID: <b>HG1_161116A</b>				SeqNo: <b>4158001</b>		Prep Date: <b>11/16/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0095	0.020								J

LCS		Sample ID: <b>LCS-94677-94677</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/16/2016 11:27 PM</b>		
Client ID:		Run ID: <b>HG1_161116A</b>				SeqNo: <b>4158002</b>		Prep Date: <b>11/16/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1692	0.020	0.1665		0	102	80-120	0		

MS		Sample ID: <b>1611420-03AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/16/2016 11:38 PM</b>		
Client ID:		Run ID: <b>HG1_161116A</b>				SeqNo: <b>4158006</b>		Prep Date: <b>11/16/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1335	0.014	0.115	0.02647	93.1	75-125		0		

MSD		Sample ID: <b>1611420-03AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>11/16/2016 11:40 PM</b>		
Client ID:		Run ID: <b>HG1_161116A</b>				SeqNo: <b>4158007</b>		Prep Date: <b>11/16/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1404	0.014	0.1159	0.02647	98.3	75-125	0.1335	5.03	35	

The following samples were analyzed in this batch: 1611728-01A

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94498 Instrument ID ICP2 Method: SW846 6010C

MBLK		Sample ID: MBLK-94498-94498				Units: mg/Kg		Analysis Date: 11/15/2016 12:04 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4154287		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.02936	0.50								J
Chromium	0.03967	0.25								J
Copper	ND	0.50								
Lead	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.06949	0.50								J

MBLK		Sample ID: MBLK-94498-94498				Units: mg/Kg		Analysis Date: 11/15/2016 03:30 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4155466		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nickel	ND	0.25								

LCS		Sample ID: LCS-94498-94498				Units: mg/Kg		Analysis Date: 11/15/2016 12:09 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4154288		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.654	0.25	5	0	93.1	80-120	0			
Barium	4.605	0.25	5	0	92.1	80-120	0			
Cadmium	4.714	0.50	5	0	94.3	80-120	0			
Chromium	4.684	0.25	5	0	93.7	80-120	0			
Copper	4.92	0.50	5	0	98.4	80-120	0			
Lead	4.544	0.25	5	0	90.9	80-120	0			
Selenium	4.406	0.50	5	0	88.1	80-120	0			
Silver	4.609	0.25	5	0	92.2	80-120	0			
Zinc	4.657	0.50	5	0	93.1	80-120	0			

LCS		Sample ID: LCS-94498-94498				Units: mg/Kg		Analysis Date: 11/15/2016 03:35 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4155467		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nickel	4.697	0.25	5	0	93.9	80-120	0			

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94498 Instrument ID ICP2 Method: SW846 6010C

MS		Sample ID: 1611420-03AMS				Units: mg/Kg		Analysis Date: 11/15/2016 12:31 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4154292		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	39.55	0.40	7.949	27.06	157	75-125	0			S
Chromium	15.26	0.40	7.949	5.228	126	75-125	0			S
Copper	13.4	0.79	7.949	6.177	90.9	75-125	0			
Silver	7.604	0.40	7.949	-0.3095	99.6	75-125	0			

MS		Sample ID: 1611420-03AMS				Units: mg/Kg		Analysis Date: 11/15/2016 03:46 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4155469		Prep Date: 11/14/2016		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.55	4.0	7.949	8.87	71.4	75-125	0			S
Cadmium	9.161	7.9	7.949	0.2087	113	75-125	0			
Lead	15.38	4.0	7.949	7.058	105	75-125	0			
Nickel	20.87	4.0	7.949	13.32	95	75-125	0			
Selenium	9.099	7.9	7.949	0.1652	112	75-125	0			
Zinc	46.91	7.9	7.949	42.42	56.5	75-125	0			SO

MSD		Sample ID: 1611420-03AMSD				Units: mg/Kg		Analysis Date: 11/15/2016 12:37 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4154293		Prep Date: 11/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	39.87	0.39	7.862	27.06	163	75-125	39.55	0.803	20	S
Chromium	14.6	0.39	7.862	5.228	119	75-125	15.26	4.42	20	
Copper	13.06	0.79	7.862	6.177	87.6	75-125	13.4	2.57	20	
Silver	7.164	0.39	7.862	-0.3095	95.1	75-125	7.604	5.96	20	

MSD		Sample ID: 1611420-03AMSD				Units: mg/Kg		Analysis Date: 11/15/2016 03:52 PM		
Client ID:		Run ID: ICP2_161115A			SeqNo: 4155470		Prep Date: 11/14/2016		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.43	3.9	7.862	8.87	58	75-125	14.55	8.01	20	S
Cadmium	7.831	7.9	7.862	0.2087	97	75-125	9.161	0	20	J
Lead	13.67	3.9	7.862	7.058	84	75-125	15.38	11.8	20	
Nickel	17.53	3.9	7.862	13.32	53.6	75-125	20.87	17.4	20	S
Selenium	8.598	7.9	7.862	0.1652	107	75-125	9.099	5.66	20	
Zinc	42.94	7.9	7.862	42.42	6.59	75-125	46.91	8.85	20	SO

The following samples were analyzed in this batch: 1611728-01A

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94649** Instrument ID **SAR** Method: **USDA H60 Metho**

<b>DUP</b>	Sample ID: <b>1611909-01ADUP</b>		Units: <b>none</b>		Analysis Date: <b>11/16/2016</b>					
Client ID:	Run ID: <b>SAR_161116A</b>		SeqNo: <b>4157537</b>		Prep Date: <b>11/16/2016</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	2.257	0.010	0	0	0		2.242	0.646	50	

The following samples were analyzed in this batch:

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94466 Instrument ID SVMS5 Method: SW846 8270D

MBLK		Sample ID: SBLKS1-94466-94466				Units: µg/Kg		Analysis Date: 11/14/2016 05:42 PM		
Client ID:		Run ID: SVMS5_161114A		SeqNo: 4153728		Prep Date: 11/14/2016		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								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	2783	0	3333	0	83.5	12-100	0			
Surr: 4-Terphenyl-d14	2792	0	3333	0	83.8	25-137	0			
Surr: Nitrobenzene-d5	2093	0	3333	0	62.8	37-107	0			

LCS		Sample ID: SLCSS1-94466-94466				Units: µg/Kg		Analysis Date: 11/14/2016 06:05 PM		
Client ID:		Run ID: SVMS5_161114A		SeqNo: 4153729		Prep Date: 11/14/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	986.7	6.7	1333	0	74	45-110	0			
Anthracene	1107	6.7	1333	0	83.1	55-105	0			
Benzo(a)anthracene	1151	6.7	1333	0	86.3	50-110	0			
Benzo(a)pyrene	1078	6.7	1333	0	80.9	50-110	0			
Benzo(b)fluoranthene	1034	6.7	1333	0	77.6	45-115	0			
Benzo(k)fluoranthene	1107	6.7	1333	0	83.1	45-115	0			
Chrysene	1116	6.7	1333	0	83.7	55-110	0			
Dibenzo(a,h)anthracene	1175	6.7	1333	0	88.2	40-125	0			
Fluoranthene	1098	6.7	1333	0	82.4	55-115	0			
Fluorene	1069	6.7	1333	0	80.2	50-110	0			
Indeno(1,2,3-cd)pyrene	1057	6.7	1333	0	79.3	40-120	0			
Naphthalene	858.7	6.7	1333	0	64.4	40-105	0			
Pyrene	1186	6.7	1333	0	89	45-125	0			
Surr: 2-Fluorobiphenyl	2645	0	3333	0	79.4	12-100	0			
Surr: 4-Terphenyl-d14	2697	0	3333	0	80.9	25-137	0			
Surr: Nitrobenzene-d5	2045	0	3333	0	61.4	37-107	0			

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94466 Instrument ID SVMS5 Method: SW846 8270D

MS				Sample ID: 1611649-09B MS			Units: µg/Kg		Analysis Date: 11/14/2016 09:01 PM		
Client ID:		Run ID: SVMS5_161114A		SeqNo: 4153730		Prep Date: 11/14/2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1017	6.4	1279	0	79.5	45-110	0				
Anthracene	1073	6.4	1279	0	83.9	55-105	0				
Benzo(a)anthracene	1093	6.4	1279	0	85.5	50-110	0				
Benzo(a)pyrene	1077	6.4	1279	0	84.2	50-110	0				
Benzo(b)fluoranthene	999.2	6.4	1279	0	78.1	45-115	0				
Benzo(k)fluoranthene	1089	6.4	1279	0	85.2	45-115	0				
Chrysene	1093	6.4	1279	0	85.5	55-110	0				
Dibenzo(a,h)anthracene	1147	6.4	1279	0	89.7	40-125	0				
Fluoranthene	1043	6.4	1279	0	81.6	55-115	0				
Fluorene	1078	6.4	1279	0	84.3	50-110	0				
Indeno(1,2,3-cd)pyrene	1015	6.4	1279	0	79.4	40-120	0				
Naphthalene	871.9	6.4	1279	0	68.2	40-105	0				
Pyrene	1158	6.4	1279	0	90.6	45-125	0				
Surr: 2-Fluorobiphenyl	2735	0	3198	0	85.5	12-100	0				
Surr: 4-Terphenyl-d14	2599	0	3198	0	81.3	25-137	0				
Surr: Nitrobenzene-d5	2145	0	3198	0	67.1	37-107	0				

MSD				Sample ID: 1611649-09B MSD			Units: µg/Kg		Analysis Date: 11/14/2016 09:24 PM		
Client ID:		Run ID: SVMS5_161114A		SeqNo: 4153731		Prep Date: 11/14/2016		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1063	6.6	1325	0	80.2	45-110	1017	4.43	30		
Anthracene	1139	6.6	1325	0	85.9	55-105	1073	5.91	30		
Benzo(a)anthracene	1184	6.6	1325	0	89.3	50-110	1093	7.96	30		
Benzo(a)pyrene	1115	6.6	1325	0	84.1	50-110	1077	3.44	30		
Benzo(b)fluoranthene	1046	6.6	1325	0	78.9	45-115	999.2	4.57	30		
Benzo(k)fluoranthene	1149	6.6	1325	0	86.7	45-115	1089	5.36	30		
Chrysene	1157	6.6	1325	0	87.3	55-110	1093	5.7	30		
Dibenzo(a,h)anthracene	1202	6.6	1325	0	90.7	40-125	1147	4.66	30		
Fluoranthene	1129	6.6	1325	0	85.2	55-115	1043	7.93	30		
Fluorene	1137	6.6	1325	0	85.8	50-110	1078	5.26	30		
Indeno(1,2,3-cd)pyrene	1079	6.6	1325	0	81.4	40-120	1015	6.1	30		
Naphthalene	880.9	6.6	1325	0	66.5	40-105	871.9	1.03	30		
Pyrene	1241	6.6	1325	0	93.7	45-125	1158	6.92	30		
Surr: 2-Fluorobiphenyl	2825	0	3314	0	85.2	12-100	2735	3.23	40		
Surr: 4-Terphenyl-d14	2833	0	3314	0	85.5	25-137	2599	8.61	40		
Surr: Nitrobenzene-d5	2174	0	3314	0	65.6	37-107	2145	1.35	40		

The following samples were analyzed in this batch: 1611728-01A

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94464 Instrument ID VMS7 Method: SW8260B

MBLK		Sample ID: MBLK-94464-94464				Units: µg/Kg-dry		Analysis Date: 11/13/2016 11:15 A		
Client ID:		Run ID: VMS7_161113A			SeqNo: 4150461		Prep Date: 11/13/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	980	0	1000	0	98	70-130	0			
Surr: 4-Bromofluorobenzene	963	0	1000	0	96.3	70-130	0			
Surr: Dibromofluoromethane	922	0	1000	0	92.2	70-130	0			
Surr: Toluene-d8	1008	0	1000	0	101	70-130	0			

LCS		Sample ID: LCS-94464-94464				Units: µg/Kg-dry		Analysis Date: 11/13/2016 10:12 A		
Client ID:		Run ID: VMS7_161113A			SeqNo: 4150460		Prep Date: 11/13/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1070	30	1000	0	107	75-125	0			
Ethylbenzene	1048	30	1000	0	105	75-125	0			
m,p-Xylene	2118	60	2000	0	106	80-125	0			
o-Xylene	1055	30	1000	0	106	75-125	0			
Toluene	1046	30	1000	0	105	70-125	0			
Xylenes, Total	3174	90	3000	0	106	75-125	0			
Surr: 1,2-Dichloroethane-d4	979	0	1000	0	97.9	70-130	0			
Surr: 4-Bromofluorobenzene	1006	0	1000	0	101	70-130	0			
Surr: Dibromofluoromethane	991	0	1000	0	99.1	70-130	0			
Surr: Toluene-d8	988	0	1000	0	98.8	70-130	0			

MS		Sample ID: 1611395-02A MS				Units: µg/Kg-dry		Analysis Date: 11/13/2016 07:48 PM		
Client ID:		Run ID: VMS9_161113A			SeqNo: 4149968		Prep Date: 11/13/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1441	41	1381	0	104	75-125	0			
Ethylbenzene	1464	41	1381	0	106	75-125	0			
m,p-Xylene	2975	83	2762	0	108	80-125	0			
o-Xylene	1470	41	1381	0	106	75-125	0			
Toluene	1442	41	1381	0	104	70-125	0			
Xylenes, Total	4445	120	4143	0	107	75-125	0			
Surr: 1,2-Dichloroethane-d4	1445	0	1381	0	105	70-130	0			
Surr: 4-Bromofluorobenzene	1414	0	1381	0	102	70-130	0			
Surr: Dibromofluoromethane	1284	0	1381	0	93	70-130	0			
Surr: Toluene-d8	1366	0	1381	0	98.9	70-130	0			

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94464**      Instrument ID **VMS7**      Method: **SW8260B**

MSD		Sample ID: 1611395-02A MSD				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>11/13/2016 08:12 PM</b>		
Client ID:		Run ID: <b>VMS9_161113A</b>			SeqNo: <b>4149969</b>		Prep Date: <b>11/13/2016</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1473	41	1381	0	107	75-125	1441	2.18	30	
Ethylbenzene	1474	41	1381	0	107	75-125	1464	0.705	30	
m,p-Xylene	2939	83	2762	0	106	80-125	2975	1.24	30	
o-Xylene	1483	41	1381	0	107	75-125	1470	0.888	30	
Toluene	1392	41	1381	0	101	70-125	1442	3.56	30	
Xylenes, Total	4422	120	4143	0	107	75-125	4445	0.53	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	1481	0	1381	0	107	70-130	1445	2.45	30	
<i>Surr: 4-Bromofluorobenzene</i>	1456	0	1381	0	105	70-130	1414	2.93	30	
<i>Surr: Dibromofluoromethane</i>	1351	0	1381	0	97.8	70-130	1284	5.14	30	
<i>Surr: Toluene-d8</i>	1380	0	1381	0	99.9	70-130	1366	1.01	30	

The following samples were analyzed in this batch: 1611728-01A

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94502**      Instrument ID **WETCHEM**      Method: **SW9045D**

LCS		Sample ID: <b>LCS-94502-94502</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/14/2016 04:05 PM</b>		
Client ID:		Run ID: <b>WETCHEM_161114N</b>		SeqNo: <b>4151908</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.95	0	4	0	98.8	90-110	0			

DUP		Sample ID: <b>1611728-01A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/14/2016 04:05 PM</b>		
Client ID: <b>Starkey 1 Landfarm</b>		Run ID: <b>WETCHEM_161114N</b>		SeqNo: <b>4151915</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.7	0	0	0	0	0-0	7.73	0.389	20	

DUP		Sample ID: <b>1611924-01A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/14/2016 04:05 PM</b>		
Client ID:		Run ID: <b>WETCHEM_161114N</b>		SeqNo: <b>4151927</b>		Prep Date: <b>11/14/2016</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.67	0	0	0	0	0-0	7.75	1.04	20	

**The following samples were analyzed in this batch:**     

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: 94571 Instrument ID WETCHEM Method: SW7196A

<b>MBLK</b>	Sample ID: <b>MBLK-94571-94571</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>11/15/2016 05:00 PM</b>					
Client ID:	Run ID: <b>WETCHEM_161115Q</b>		SeqNo: <b>4155113</b>		Prep Date: <b>11/14/2016</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

<b>LCS</b>	Sample ID: <b>LCS-94571-94571</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>11/15/2016 05:00 PM</b>					
Client ID:	Run ID: <b>WETCHEM_161115Q</b>		SeqNo: <b>4155112</b>		Prep Date: <b>11/14/2016</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.43 1.0 5 0 88.6 80-120 0

<b>MS</b>	Sample ID: <b>1611420-03A MS</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>11/15/2016 05:00 PM</b>					
Client ID:	Run ID: <b>WETCHEM_161115Q</b>		SeqNo: <b>4155101</b>		Prep Date: <b>11/14/2016</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.222 1.0 5.051 0.02 83.2 75-125 0

<b>MS</b>	Sample ID: <b>1611420-03A MSI</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>11/15/2016 05:00 PM</b>					
Client ID:	Run ID: <b>WETCHEM_161115Q</b>		SeqNo: <b>4155103</b>		Prep Date: <b>11/14/2016</b> DF: <b>100</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1554 97 1562 0.02 99.5 75-125 0

<b>MSD</b>	Sample ID: <b>1611420-03A MSD</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>11/15/2016 05:00 PM</b>					
Client ID:	Run ID: <b>WETCHEM_161115Q</b>		SeqNo: <b>4155102</b>		Prep Date: <b>11/14/2016</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.92 1.0 5 0.02 78 75-125 4.222 7.42 20

The following samples were analyzed in this batch:

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

**Client:** Caerus Oil and Gas LLC  
**Work Order:** 1611728  
**Project:** Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **94649**      Instrument ID **WETCHEM**      Method: **USDA H60 Metho**

<b>DUP</b>	Sample ID: <b>1611909-01A DUP</b>		Units: <b>mmhos/cm @25°</b>		Analysis Date: <b>11/17/2016 04:45 PM</b>					
Client ID:	Run ID: <b>WETCHEM_1611170</b>		SeqNo: <b>4159987</b>		Prep Date: <b>11/16/2016</b> DF: <b>50</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.315	0.25	0	0	0		1.2	9.15	50	

**The following samples were analyzed in this batch:**     

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

Client: Caerus Oil and Gas LLC  
 Work Order: 1611728  
 Project: Starkey 1 Landfarm

# QC BATCH REPORT

Batch ID: **R200363** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>	Sample ID: <b>WBLKS-R200363</b>				Units: % of sample			Analysis Date: <b>11/10/2016 07:02 PM</b>		
Client ID:	Run ID: <b>MOIST_161110E</b>			SeqNo: <b>4147365</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

<b>LCS</b>	Sample ID: <b>LCS-R200363</b>				Units: % of sample			Analysis Date: <b>11/10/2016 07:02 PM</b>		
Client ID:	Run ID: <b>MOIST_161110E</b>			SeqNo: <b>4147363</b>		Prep Date:		DF: <b>1</b>		
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

<b>DUP</b>	Sample ID: <b>1611649-56B DUP</b>				Units: % of sample			Analysis Date: <b>11/10/2016 07:02 PM</b>		
Client ID:	Run ID: <b>MOIST_161110E</b>			SeqNo: <b>4147327</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.85 0.050 0 0 0 19.13 8.6 20

<b>DUP</b>	Sample ID: <b>1611728-01A DUP</b>				Units: % of sample			Analysis Date: <b>11/10/2016 07:02 PM</b>		
Client ID: <b>Starkey 1 Landfarm</b>	Run ID: <b>MOIST_161110E</b>			SeqNo: <b>4147359</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.62 0.050 0 0 0 13.11 3.82 20

The following samples were analyzed in this batch: 1611728-01A

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



# ALS Laboratory Group

ALS Holland 3352 128th Ave, Holland MI  
616-572-1944 616-399-6070

## Chain-of-Custody

Form 2028

WORKORDER # **1611728**

PROJECT NAME	Starkey 1 Landfarm		SAMPLER	Tyler Rust		DATE	11/9/16		PAGE	1 of 1					
PROJECT NO.		SITE ID				TURNAROUND	STD 5 Day		DISPOSAL	By Lab or Return to C					
COMPANY NAME	Caerus Piceance, LLC		EDD FORMAT												
SEND REPORT TO	Jake Janicek		PURCHASE ORDER												
ADDRESS	120 N. Railroad, suite D		BILL TO COMPANY	Caerus Piceance, LLC											
CITY / STATE / ZIP	Parachute Co, 81635		INVOICE ATTN TO	Jake Janicek											
PHONE	870-285-9808		ADDRESS	120 N. Railroad, suite D											
FAX			CITY / STATE / ZIP	Parachute Co, 81635											
E-MAIL	jjanicek@caerusollandgas.com		PHONE	970-285-9808											
			FAX												
			E-MAIL	invoices@caerusollandgas.com											
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	TPH/GRO/DRO	BTEX	Table 910 PAH's	EC	PH	SAR	Benzene	Table 910 Metals
	Starkey 1 Landfarm	Soil	11/9/16	11:26	2	-	-	X	X	X	X	X	X	X	X

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

For metals or anions, please detail analytes below.

Comments: 4.0c

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)

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	<i>Tyler Rust</i>	Tyler Rust	11/9/16	2:38
RECEIVED BY	<i>ML</i>		11/9/16	2:38
RELINQUISHED BY	<i>Diane F. Shea</i>	Diane F. Shea	11-9-16	1730
RECEIVED BY	<i>Diane F. Shea</i>		11/10/16	0930
RELINQUISHED BY				
RECEIVED BY				



Sample Receipt Checklist

Client Name: **CAERUS**

Date/Time Received: **10-Nov-16 09:30**

Work Order: **1611728**

Received by: **DS**

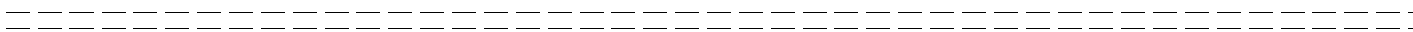
Checklist completed by Diane Shaw 10-Nov-16  
eSignature Date

Reviewed by: Chad Whilton 11-Nov-16  
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>4.0/4.0 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>11/10/2016 1:59:24 PM</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:	<u></u>		

Login Notes:



Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_

Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments:

CorrectiveAction:



30-Jul-2013

Herman Lucero  
HRL Compliance Solutions  
2385 F 1/2 Road  
Grand Junction, CO 81505

Re: **Caerus Chevron 41-8D 13-199 7/22/13**

Work Order: **1307799**

Dear Herman,

ALS Environmental received 3 samples on 23-Jul-2013 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 14.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: 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 ALS

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

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions  
**Project:** Caerus Chevron 41-8D 13-199 7/22/13  
**Work Order:** 1307799

**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>
1307799-01	BKGD 1	Soil		7/22/2013 13:45	7/23/2013 10:00	<input type="checkbox"/>
1307799-02	BKGD 2	Soil		7/22/2013 13:35	7/23/2013 10:00	<input type="checkbox"/>
1307799-03	BKGD 3	Soil		7/22/2013 13:30	7/23/2013 10:00	<input type="checkbox"/>

**Client:** HRL Compliance Solutions  
**Project:** Caerus Chevron 41-8D 13-199 7/22/13  
**WorkOrder:** 1307799

**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
LCS D	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
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: 30-Jul-13

Client: HRL Compliance Solutions  
 Project: Caerus Chevron 41-8D 13-199 7/22/13  
 Sample ID: BKGD 1  
 Collection Date: 7/22/2013 01:45 PM

Work Order: 1307799  
 Lab ID: 1307799-01  
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>ML</b>
Arsenic	39		9.2	mg/Kg-dry	5	7/27/2013 02:20 AM
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW6020A</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>RH</b>
Calcium	81		10	mg/L	20	7/26/2013 03:49 PM
Magnesium	28		4.0	mg/L	20	7/26/2013 03:49 PM
Sodium	120		4.0	mg/L	20	7/26/2013 03:49 PM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHO</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>RH</b>
Sodium Adsorption Ratio	2.8		0.010	none	1	7/26/2013
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	1.2		0.050	mmhos/cm @25	10	7/25/2013 03:10 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	82		0.050	% of sample	1	7/23/2013 12:40 PM
<b>PH</b>			<b>SW9045D</b>		Prep Date: <b>7/23/2013</b>	Analyst: <b>JB</b>
pH	9.1			s.u.	1	7/23/2013 11:00 AM

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

**ALS Group USA, Corp**

Date: 30-Jul-13

**Client:** HRL Compliance Solutions**Project:** Caerus Chevron 41-8D 13-199 7/22/13**Work Order:** 1307799**Sample ID:** BKGD 2**Lab ID:** 1307799-02**Collection Date:** 7/22/2013 01:35 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>ML</b>
Arsenic	8.3		2.0	mg/Kg-dry	5	7/27/2013 02:44 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	7.3		0.050	% of sample	1	7/23/2013

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

**ALS Group USA, Corp**

Date: 30-Jul-13

**Client:** HRL Compliance Solutions**Project:** Caerus Chevron 41-8D 13-199 7/22/13**Work Order:** 1307799**Sample ID:** BKGD 3**Lab ID:** 1307799-03**Collection Date:** 7/22/2013 01:30 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/25/2013</b>	Analyst: <b>ML</b>
Arsenic	8.6		1.8	mg/Kg-dry	5	7/27/2013 02:50 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	5.2		0.050	% of sample	1	7/23/2013

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

Client: HRL Compliance Solutions

**QC BATCH REPORT**

Work Order: 1307799

Project: Caerus Chevron 41-8D 13-199 7/22/13

Batch ID: **50013** Instrument ID **ICPMS1** Method: **SW6020A**

<b>MBLK</b>	Sample ID: <b>MBLK-50013-50013</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>7/26/2013 02:01 PM</b>					
Client ID:	Run ID: <b>ICPMS1_130726A</b>		SeqNo: <b>2392468</b>		Prep Date: <b>7/25/2013</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.03916	0.25								J

<b>LCS</b>	Sample ID: <b>LCS-50013-50013</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>7/26/2013 02:07 PM</b>					
Client ID:	Run ID: <b>ICPMS1_130726A</b>		SeqNo: <b>2392469</b>		Prep Date: <b>7/25/2013</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.799	0.25	5	0	96	80-120	0			

<b>MS</b>	Sample ID: <b>1307769-02BMS</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>7/26/2013 02:19 PM</b>					
Client ID:	Run ID: <b>ICPMS1_130726A</b>		SeqNo: <b>2392471</b>		Prep Date: <b>7/25/2013</b>		DF: <b>5</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.8	1.9	7.418	5.276	101	75-125	0			

<b>MSD</b>	Sample ID: <b>1307769-02BMSD</b>		Units: <b>mg/Kg</b>		Analysis Date: <b>7/26/2013 02:25 PM</b>					
Client ID:	Run ID: <b>ICPMS1_130726A</b>		SeqNo: <b>2392472</b>		Prep Date: <b>7/25/2013</b>		DF: <b>5</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.82	1.9	7.645	5.276	112	75-125	12.8	7.68	25	

The following samples were analyzed in this batch: 

1307799-01A	1307799-02A	1307799-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1307799  
**Project:** Caerus Chevron 41-8D 13-199 7/22/13

# QC BATCH REPORT

Batch ID: **49915** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>	Sample ID: <b>1307634-01B DUP</b>	Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>7/25/2013 03:10 PM</b>						
Client ID:	Run ID: <b>WETCHEM_130725J</b>	SeqNo: <b>2390794</b>	Prep Date: <b>7/25/2013</b>	DF: <b>10</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.583	0.050	0	0	0		1.847	15.4	50	

**The following samples were analyzed in this batch:**

**Client:** HRL Compliance Solutions  
**Work Order:** 1307799  
**Project:** Caerus Chevron 41-8D 13-199 7/22/13

# QC BATCH REPORT

Batch ID: **49934**      Instrument ID **WETCHEM**      Method: **SW9045D**

<b>LCS</b>	Sample ID: <b>LCS-49934-49934</b>		Units: <b>s.u.</b>		Analysis Date: <b>7/23/2013 11:00 AM</b>					
Client ID:	Run ID: <b>WETCHEM_130723L</b>		SeqNo: <b>2388161</b>		Prep Date: <b>7/23/2013</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH                                      4.53                      0                      4.4                      0                      103                      90-110                      0

<b>DUP</b>	Sample ID: <b>1307798-01B DUP</b>		Units: <b>s.u.</b>		Analysis Date: <b>7/23/2013 11:00 AM</b>					
Client ID:	Run ID: <b>WETCHEM_130723L</b>		SeqNo: <b>2388163</b>		Prep Date: <b>7/23/2013</b> DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH                                      9.13                      0                      0                      0                      0                      0-0                      9.13                      0                      20

**The following samples were analyzed in this batch:**     

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

Client: HRL Compliance Solutions  
 Work Order: 1307799  
 Project: Caerus Chevron 41-8D 13-199 7/22/13

# QC BATCH REPORT

Batch ID: **R124049** Instrument ID **MOIST** Method: **A2540 G**

<b>MBLK</b>	Sample ID: <b>WBLKS-R124049</b>		Units: % of sample				Analysis Date: <b>7/23/2013 12:40 PM</b>			
Client ID:	Run ID: <b>MOIST_130723A</b>		SeqNo: <b>2388372</b>		Prep Date:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

<b>LCS</b>	Sample ID: <b>LCS-R124049</b>		Units: % of sample				Analysis Date: <b>7/23/2013 12:40 PM</b>			
Client ID:	Run ID: <b>MOIST_130723A</b>		SeqNo: <b>2388371</b>		Prep Date:		DF: <b>1</b>			
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

<b>DUP</b>	Sample ID: <b>1307776-06A DUP</b>		Units: % of sample				Analysis Date: <b>7/23/2013 12:40 PM</b>			
Client ID:	Run ID: <b>MOIST_130723A</b>		SeqNo: <b>2388357</b>		Prep Date:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 48.63 0.050 0 0 0 0-0 49.35 1.47 20

<b>DUP</b>	Sample ID: <b>1307798-01B DUP</b>		Units: % of sample				Analysis Date: <b>7/23/2013 12:40 PM</b>			
Client ID:	Run ID: <b>MOIST_130723A</b>		SeqNo: <b>2388365</b>		Prep Date:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 19.99 0.050 0 0 0 0-0 20.28 1.44 20

The following samples were analyzed in this batch: 1307799-01A

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

Client: HRL Compliance Solutions  
 Work Order: 1307799  
 Project: Caerus Chevron 41-8D 13-199 7/22/13

# QC BATCH REPORT

Batch ID: **R124058** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: <b>WBLKS-R124058</b>				Units: % of sample			Analysis Date: <b>7/23/2013</b>		
Client ID:		Run ID: <b>MOIST_130723C</b>				SeqNo: <b>2388576</b>		Prep Date:		DF: <b>1</b>	
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: <b>LCS-R124058</b>				Units: % of sample			Analysis Date: <b>7/23/2013</b>		
Client ID:		Run ID: <b>MOIST_130723C</b>				SeqNo: <b>2388574</b>		Prep Date:		DF: <b>1</b>	
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: <b>1307794-01B DUP</b>				Units: % of sample			Analysis Date: <b>7/23/2013</b>		
Client ID:		Run ID: <b>MOIST_130723C</b>				SeqNo: <b>2388528</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 15.1 0.050 0 0 0 0-0 15.45 2.29 20

DUP		Sample ID: <b>1307801-04A DUP</b>				Units: % of sample			Analysis Date: <b>7/23/2013</b>		
Client ID:		Run ID: <b>MOIST_130723C</b>				SeqNo: <b>2388551</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 32.26 0.050 0 0 0 0-0 31.81 1.4 20

The following samples were analyzed in this batch: 1307799-02A 1307799-03A

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



# ALS Laboratory Group

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

# Chain-of-Custody

Form 202r8

WORKORDER #	1307799
PAGE	1 of 1

PROJECT NAME	CAERUS CHEVRON 41-8D	SAMPLER	Casey Richardson				DATE	7-22-13				TURNAROUND	5 DAY				DISPOSAL	Lab or Return to Client			
PROJECT No.	13-199	SITE ID																			
		EDD FORMAT																			
		PURCHASE ORDER																			
COMPANY NAME	HCSI	BILL TO COMPANY	PDC Energy																		
SEND REPORT TO	Herman Lucero	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	hlucero@hrlcomp.com	E-MAIL	ewinters@petd.com																		
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	SAR/EC/PAH	ARSENIC												
1	BKGD 1	SOIL	7-22-13	1345	2	8		X	X												
2	BKGD 2	SOIL	7-22-13	1335	1	8			X												
3	BKGD 3	SOIL	7-22-13	1330	1	8			X												

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

For metals or anions, please detail analytes below.

Comments:  5.02	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Casey Richardson	7-22-13	1625
RECEIVED BY		Colby Koerner	7/22/13	1625
RELINQUISHED BY		Colby Koerner	7/22/13	1625
RECEIVED BY	Fed Ex			
RELINQUISHED BY				
RECEIVED BY		Diane F Shaw	7/23/13	1000

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **23-Jul-13 10:00**

Work Order: **1307799**

Received by: **DS**

Checklist completed by *Diane Shaw* 23-Jul-13  
eSignature Date

Reviewed by: *Ann Preston* 28-Jul-13  
eSignature 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

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

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:

From: (970) 424-4749  
Lab Hub, LLC

Origin ID: RILA



Ship Date: 22JUL13  
ActWgt: 80.0 LB  
CAD: 103923490/INET3370

Dims: 25 X 14 X 15 IN

127 E First Street  
PARACHUTE, CO 81635



J13111302120326

SHIP TO: (616) 399-6070

BILL RECIPIENT

Sample receiving  
ALS Holland  
3352 128TH AVE

HOLLAND, MI 49424

Delivery Address Bar Code



Ref # 1001-072213-3  
Invoice #  
PO #  
Dept #

TUE - 23 JUL 3:00P  
STANDARD OVERNIGHT

TRK# 7962 8879 8431

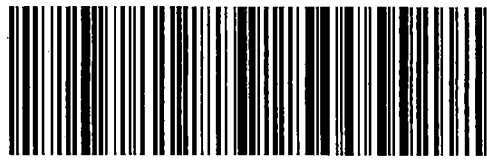
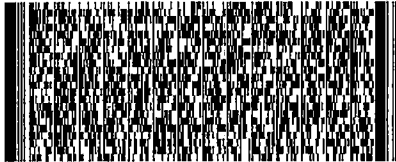
0201

49424

MI-US

GRR

**XX GRRR**



518G1/AA04/53AB

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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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