

**Parachute Creek 9 (Chevron 42-5D) (Location ID 335814)**  
**Partially Buried Vessel Removal (Non-Facility ID 435733)**  
**Form 4 (Notice of Completion)**  
**Narrative Attachment**

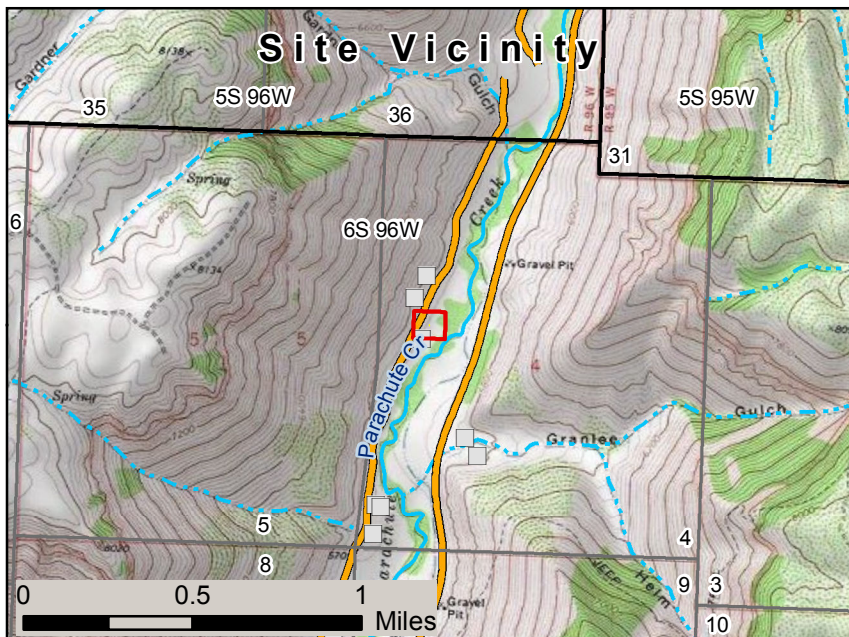
This Form 4 (Notice of Completion) was prepared for the purpose of describing completed work associated with the assessment of soil during the removal of a partially buried vessel (PBV) (Non-Facility ID 435733) at the Parachute Creek 9 (Chevron 42-5D) (Location ID 335814) in the Caerus Piceance, LLC (Caerus) area of operations. This assessment was conducted using procedures approved under Colorado Oil and Gas Conservation Commission (COGCC) Remediation #8164. A Form 19 was submitted to the COGCC, but at the time of reporting, a spill/release tracking number had not been assigned. However, Carlos Lujan of the COGCC approved the closure of this project since confirmation samples proved successful remediation. 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 700 cubic yards of soil was removed during excavation activities. Half of the impacted soil was disposed of at ECDC Landfill in East Carbon, Utah and the other half was remediated onsite by utilizing ex-situ remediation technologies.

On June 14, 21, and 28, 2013 confirmation soil samples were collected from the soil around and beneath the removed PBV (North Wall, 7', Excavation Footprint, 17', West Wall, 8', East Wall, 8', and South Wall, 9'). 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 pH and electrical conductivity (EC) measurements of soil samples South Wall, 9', East Wall, 8', and Excavation Footprint, 17'. 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 pH and EC to soils deeper than three feet below ground surface. Background samples were collected from an undisturbed area north 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.

Half of the impacted soil removed during excavation activities was remediated onsite to below COGCC Table 910-1 Concentration Levels by utilizing ex-situ remediation technologies. On June 17, 2013, a confirmation soil sample was collected from the removed soil (Containment Cell). The soil sample was submitted for laboratory analysis of all COGCC Table 910-1 analytes. Analytical results indicate the confirmation soil sample was in compliance with COGCC Table 910-1 Concentration Levels for all analytes or were within background concentrations. Laboratory analytical results are summarized in the attached analytical table and laboratory analytical reports are included as an attachment. The remediated soil was used to backfill the excavation.

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



## Sample Location Map

Location: Chevron 42-5D

- Sample Locations
- Township
- Caerus Pad
- Section
- Perennial Stream
- Intermittent Stream
- Roads
- ▨ Excavation Area



0 50 100 Feet

Caerus Piceance LLC  
Parachute Creek 9 Partially Buried Vault Removal  
Soil Sample Confirmation and Background Analytical Results

			Sample ID								
COGCC Table 910-1 Analytical Suite	Table 910-1 Standard	Units	North Wall, 7'	South Wall, 9'	East Wall, 8'	West Wall, 8'	Excavation Footprint, 17'	Containment Cell	BKGD 1	BKGD 2	BKGD 3
Sample Date			6/28/2013	6/14/2013	6/14/2013	6/14/2013	6/21/2013	6/17/2013	6/28/2013	6/28/2013	6/28/2013
Organics											
TEPH (DRO)	500	mg/kg	24	36	37	320	100	170	NA	NA	NA
TVPH (GRO)	500	mg/kg	ND	ND	ND	ND	48	68	NA	NA	NA
TPH	500	mg/kg	24	36	37	320	148	238	NA	NA	NA
BENZENE	0.17	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
TOLUENE	85	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
ETHYLBENZENE	100	mg/kg	ND	ND	ND	ND	0.083	ND	NA	NA	NA
XYLENE TOTAL	175	mg/kg	ND	ND	ND	ND	1.6	0.440	NA	NA	NA
ACENAPHTHENE	1,000	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
ANTHRACENE	1,000	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
BENZO(A)ANTHRACENE	0.22	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
BENZO(A)PYRENE	0.022	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
BENZO(B)FLUORANTHENE	0.22	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
BENZO(K)FLUORANTHENE	2.2	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
CHRYSENE	22	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	0.022	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
FLUORANTHENE	1,000	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
FLUORENE	1,000	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	0.22	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
NAPHTHALENE	23	mg/kg	ND	ND	ND	ND	0.059	ND	NA	NA	NA
PYRENE	1,000	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
Metals											
MERCURY	23	mg/kg	ND	0.019	ND	ND	0.022	0.019	NA	NA	NA
ARSENIC	0.39	mg/kg	8.9	25	13	14	14	12	22	14	14
BARIUM	15,000	mg/kg	290	350	270	270	560	330	NA	NA	NA
CADMIUM	70	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
CHROMIUM (III)	120,000	mg/kg	11	23	13	14	14	18	NA	NA	NA
CHROMIUM (VI)	23	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
COPPER	3,100	mg/kg	18	27	21	21	21	19	NA	NA	NA
LEAD	400	mg/kg	13	18	13	14	17	15	NA	NA	NA
NICKEL	1,600	mg/kg	17	23	21	19	20	18	NA	NA	NA
SELENIUM	390	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
SILVER	390	mg/kg	ND	ND	ND	ND	ND	ND	NA	NA	NA
ZINC	23,000	mg/kg	65	67	69	59	69	63	NA	NA	NA
Inorganics											
Sodium Absorption Ratio	<12	unitless	3.2	8.0	8.8	4.5	3.9	4.5	0.83	NA	NA
Electric Conductivity	<4mmhos/cm or 2x background	mmhos/cm	1.1	4.2	3.1	1.4	1.8	1.5	0.99	NA	NA
pH	6 to 9	SU	8.3	8.7	9.0	8.7	9.3	8.8	8.8	NA	NA

Notes:

highlight indicates reading above COGCC Table 910-1 standards

ND - non detect

NA - not analyzed

SU - standard unit

mg/kg - milligram per kilogram

mmhos/cm - millimhos per centimeter

TEPH - total petroleum hydrocarbons - Diesel range organics

TVPH - total petroleum hydrocarbons - gasoline range organics

TPH - total petroleum hydrocarbons (TEPH and TVPH combined)

COGCC - Colorado Oil and Gas Conservation Commission





20-Jun-2013

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

Re: **PDC Parachute Creek 9 13-199-1 6/14/13**

Work Order: **1306630**

Dear Herman,

ALS Environmental received 3 samples on 15-Jun-2013 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 28.

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 Group An ALS Limited Company

Environmental 

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

RIGHT SOLUTIONS RIGHT PARTNER

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**Work Order:** 1306630

---

**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>
1306630-01	West Wall, 8'	Soil		6/14/2013 14:30	6/15/2013 09:30	<input type="checkbox"/>
1306630-02	South Wall, 9'	Soil		6/14/2013 14:55	6/15/2013 09:30	<input type="checkbox"/>
1306630-03	East Wall, 8'	Soil		6/14/2013 15:07	6/15/2013 09:30	<input type="checkbox"/>

---

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**Work Order:** 1306630

---

**Case Narrative**

Batch 49097 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 49120 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**WorkOrder:** 1306630

## **QUALIFIERS, ACRONYMS, UNITS**

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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mmhos/cm @25°F	Microhms-Centimeter at 25 Degrees Fahrenheit
none	
s.u.	Standard Units



# ALS Group USA, Corp

Date: 20-Jun-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/14/13

Sample ID: West Wall, 8'

Collection Date: 6/14/2013 02:30 PM

Work Order: 1306630

Lab ID: 1306630-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>320</b>		<b>SW8015M</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>4.9</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/18/2013 07:42 AM
Surr: 4-Terphenyl-d14	69.4		39-115	%REC	1	6/18/2013 07:42 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>3.0</b>	<b>mg/Kg-dry</b>	<b>50</b>	6/17/2013 06:12 PM
Surr: Toluene-d8	104		50-150	%REC	50	6/17/2013 06:12 PM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>LR</b>
			<b>0.018</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/17/2013 03:50 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>14</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>ML</b>
			<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
<b>Barium</b>	<b>270</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
Cadmium	ND		0.94	mg/Kg-dry	5	6/17/2013 10:30 PM
<b>Chromium</b>	<b>14</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
<b>Copper</b>	<b>21</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
<b>Lead</b>	<b>14</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/18/2013 05:59 PM
<b>Nickel</b>	<b>19</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
Selenium	ND		2.3	mg/Kg-dry	5	6/17/2013 10:30 PM
Silver	ND		2.3	mg/Kg-dry	5	6/17/2013 10:30 PM
<b>Zinc</b>	<b>59</b>		<b>4.7</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:30 PM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>51</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>12</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 12:52 PM
<b>Magnesium</b>	<b>32</b>		<b>4.8</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 12:52 PM
<b>Sodium</b>	<b>180</b>		<b>4.8</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 12:52 PM
<b>SODIUM ADSORPTION RATIO</b>						
Sodium Adsorption Ratio	4.5		<b>USDA H60 METHO</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>0.010</b>	<b>none</b>	<b>1</b>	6/18/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>CW</b>
			<b>18</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/17/2013 10:29 PM
Acenaphthylene	ND		36	µg/Kg-dry	1	6/17/2013 10:29 PM
Anthracene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM
Benzo(a)anthracene	ND		20	µg/Kg-dry	1	6/17/2013 10:29 PM
Benzo(a)pyrene	ND		20	µg/Kg-dry	1	6/17/2013 10:29 PM
Benzo(b)fluoranthene	ND		21	µg/Kg-dry	1	6/17/2013 10:29 PM
Benzo(g,h,i)perylene	ND		33	µg/Kg-dry	1	6/17/2013 10:29 PM
Benzo(k)fluoranthene	ND		21	µg/Kg-dry	1	6/17/2013 10:29 PM
Chrysene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM
Dibenzo(a,h)anthracene	ND		21	µg/Kg-dry	1	6/17/2013 10:29 PM
Fluoranthene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM

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

# ALS Group USA, Corp

Date: 20-Jun-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/14/13

Sample ID: West Wall, 8'

Collection Date: 6/14/2013 02:30 PM

Work Order: 1306630

Lab ID: 1306630-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM
Indeno(1,2,3-cd)pyrene	ND		24	µg/Kg-dry	1	6/17/2013 10:29 PM
Naphthalene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM
Pyrene	ND		18	µg/Kg-dry	1	6/17/2013 10:29 PM
Surr: 2-Fluorobiphenyl	66.3		12-100	%REC	1	6/17/2013 10:29 PM
Surr: 4-Terphenyl-d14	89.0		25-137	%REC	1	6/17/2013 10:29 PM
Surr: Nitrobenzene-d5	52.4		37-107	%REC	1	6/17/2013 10:29 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: 6/15/2013	Analyst: BG
Benzene	ND		36	µg/Kg-dry	1	6/15/2013 07:48 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	6/15/2013 07:48 PM
m,p-Xylene	110		72	µg/Kg-dry	1	6/15/2013 07:48 PM
o-Xylene	ND		36	µg/Kg-dry	1	6/15/2013 07:48 PM
Toluene	ND		36	µg/Kg-dry	1	6/15/2013 07:48 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/15/2013 07:48 PM
Surr: 1,2-Dichloroethane-d4	92.8		70-130	%REC	1	6/15/2013 07:48 PM
Surr: 4-Bromofluorobenzene	103		70-130	%REC	1	6/15/2013 07:48 PM
Surr: Dibromofluoromethane	90.0		70-130	%REC	1	6/15/2013 07:48 PM
Surr: Toluene-d8	89.8		70-130	%REC	1	6/15/2013 07:48 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: 6/17/2013	Analyst: JB
Electrical Conductivity @ Saturation	1.4		0.025	mmhos/cm @25	5	6/19/2013 12:30 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: MB
Chromium, Trivalent	14		0.60	mg/Kg-dry	1	6/19/2013 11:50 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 6/17/2013	Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	6/18/2013 12:10 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: BD
Moisture	16		0.050	% of sample	1	6/17/2013 02:00 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: CH
pH	8.7			s.u.	1	6/17/2013 09:00 AM

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

# ALS Group USA, Corp

Date: 20-Jun-13

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**Sample ID:** South Wall, 9'  
**Collection Date:** 6/14/2013 02:55 PM

**Work Order:** 1306630  
**Lab ID:** 1306630-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>36</b>		<b>SW8015M</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>5.0</b>	<b>mg/Kg-dry</b>	1	6/18/2013 08:12 AM
Surr: 4-Terphenyl-d14	44.7		39-115	%REC	1	6/18/2013 08:12 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>3.1</b>	<b>mg/Kg-dry</b>	50	6/17/2013 06:36 PM
Surr: Toluene-d8	102		50-150	%REC	50	6/17/2013 06:36 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.019</b>		<b>SW7471</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>LR</b>
			<b>0.018</b>	<b>mg/Kg-dry</b>	1	6/17/2013 03:52 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>25</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>ML</b>
			<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
<b>Barium</b>	<b>350</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
Cadmium	ND		0.79	mg/Kg-dry	5	6/17/2013 10:36 PM
<b>Chromium</b>	<b>23</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
<b>Copper</b>	<b>27</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
<b>Lead</b>	<b>18</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/18/2013 06:05 PM
<b>Nickel</b>	<b>23</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
Selenium	ND		2.0	mg/Kg-dry	5	6/17/2013 10:36 PM
Silver	ND		2.0	mg/Kg-dry	5	6/17/2013 10:36 PM
<b>Zinc</b>	<b>67</b>		<b>3.9</b>	<b>mg/Kg-dry</b>	5	6/17/2013 10:36 PM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>91</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>12</b>	<b>mg/L-dry</b>	20	6/19/2013 12:58 PM
<b>Magnesium</b>	<b>120</b>		<b>4.9</b>	<b>mg/L-dry</b>	20	6/19/2013 12:58 PM
<b>Sodium</b>	<b>540</b>		<b>4.9</b>	<b>mg/L-dry</b>	20	6/19/2013 12:58 PM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>8.0</b>		<b>USDA H60 METHO</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>0.010</b>	<b>none</b>	1	6/18/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RM</b>
			<b>18</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Acenaphthylene</b>	<b>ND</b>		<b>36</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Anthracene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>33</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Chrysene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	1	6/18/2013 01:59 PM

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

# ALS Group USA, Corp

Date: 20-Jun-13

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**Sample ID:** South Wall, 9'  
**Collection Date:** 6/14/2013 02:55 PM

**Work Order:** 1306630  
**Lab ID:** 1306630-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		18	µg/Kg-dry	1	6/18/2013 01:59 PM
Indeno(1,2,3-cd)pyrene	ND		24	µg/Kg-dry	1	6/18/2013 01:59 PM
Naphthalene	ND		18	µg/Kg-dry	1	6/18/2013 01:59 PM
Pyrene	ND		18	µg/Kg-dry	1	6/18/2013 01:59 PM
Surr: 2-Fluorobiphenyl	67.2		12-100	%REC	1	6/18/2013 01:59 PM
Surr: 4-Terphenyl-d14	100		25-137	%REC	1	6/18/2013 01:59 PM
Surr: Nitrobenzene-d5	64.1		37-107	%REC	1	6/18/2013 01:59 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: 6/15/2013	Analyst: BG
Benzene	ND		37	µg/Kg-dry	1	6/15/2013 08:12 PM
Ethylbenzene	ND		37	µg/Kg-dry	1	6/15/2013 08:12 PM
m,p-Xylene	ND		74	µg/Kg-dry	1	6/15/2013 08:12 PM
o-Xylene	ND		37	µg/Kg-dry	1	6/15/2013 08:12 PM
Toluene	ND		37	µg/Kg-dry	1	6/15/2013 08:12 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/15/2013 08:12 PM
Surr: 1,2-Dichloroethane-d4	94.2		70-130	%REC	1	6/15/2013 08:12 PM
Surr: 4-Bromofluorobenzene	105		70-130	%REC	1	6/15/2013 08:12 PM
Surr: Dibromofluoromethane	92.4		70-130	%REC	1	6/15/2013 08:12 PM
Surr: Toluene-d8	89.4		70-130	%REC	1	6/15/2013 08:12 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: 6/17/2013	Analyst: JB
Electrical Conductivity @ Saturation	4.2		0.050	mmhos/cm @25	10	6/19/2013 12:30 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: MB
Chromium, Trivalent	23		0.61	mg/Kg-dry	1	6/19/2013 11:50 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 6/17/2013	Analyst: MB
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	6/18/2013 12:10 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: BD
Moisture	19		0.050	% of sample	1	6/17/2013 02:00 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: CH
pH	8.7			s.u.	1	6/17/2013 09:00 AM

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

# ALS Group USA, Corp

Date: 20-Jun-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/14/13

Sample ID: East Wall, 8'

Collection Date: 6/14/2013 03:07 PM

Work Order: 1306630

Lab ID: 1306630-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>37</b>		<b>SW8015M</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>4.9</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/18/2013 08:42 AM
Surr: 4-Terphenyl-d14	40.8		39-115	%REC	1	6/18/2013 08:42 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RD</b>
			<b>3.0</b>	<b>mg/Kg-dry</b>	<b>50</b>	6/17/2013 07:01 PM
Surr: Toluene-d8	104		50-150	%REC	50	6/17/2013 07:01 PM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>LR</b>
			<b>0.018</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/17/2013 03:54 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>13</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>ML</b>
			<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
<b>Barium</b>	<b>270</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
Cadmium	ND		0.93	mg/Kg-dry	5	6/17/2013 10:42 PM
<b>Chromium</b>	<b>13</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
<b>Copper</b>	<b>21</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
<b>Lead</b>	<b>13</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/18/2013 06:11 PM
<b>Nickel</b>	<b>21</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
Selenium	ND		2.3	mg/Kg-dry	5	6/17/2013 10:42 PM
Silver	ND		2.3	mg/Kg-dry	5	6/17/2013 10:42 PM
<b>Zinc</b>	<b>69</b>		<b>4.6</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/17/2013 10:42 PM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>59</b>		<b>SW6020A</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>12</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 01:03 PM
<b>Magnesium</b>	<b>56</b>		<b>4.8</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 01:03 PM
<b>Sodium</b>	<b>440</b>		<b>4.8</b>	<b>mg/L-dry</b>	<b>20</b>	6/19/2013 01:03 PM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>8.8</b>		<b>USDA H60 METHO</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RH</b>
			<b>0.010</b>	<b>none</b>	<b>1</b>	6/18/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>6/17/2013</b>	Analyst: <b>RM</b>
			<b>18</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Acenaphthylene</b>	<b>ND</b>		<b>35</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Anthracene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>33</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Chrysene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>21</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/18/2013 02:20 PM

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

# ALS Group USA, Corp

Date: 20-Jun-13

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13  
**Sample ID:** East Wall, 8'  
**Collection Date:** 6/14/2013 03:07 PM

**Work Order:** 1306630  
**Lab ID:** 1306630-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		18	µg/Kg-dry	1	6/18/2013 02:20 PM
Indeno(1,2,3-cd)pyrene	ND		24	µg/Kg-dry	1	6/18/2013 02:20 PM
Naphthalene	ND		18	µg/Kg-dry	1	6/18/2013 02:20 PM
Pyrene	ND		18	µg/Kg-dry	1	6/18/2013 02:20 PM
Surr: 2-Fluorobiphenyl	60.1		12-100	%REC	1	6/18/2013 02:20 PM
Surr: 4-Terphenyl-d14	109		25-137	%REC	1	6/18/2013 02:20 PM
Surr: Nitrobenzene-d5	52.2		37-107	%REC	1	6/18/2013 02:20 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: 6/15/2013	Analyst: BG
Benzene	ND		36	µg/Kg-dry	1	6/15/2013 08:35 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	6/15/2013 08:35 PM
m,p-Xylene	ND		73	µg/Kg-dry	1	6/15/2013 08:35 PM
o-Xylene	ND		36	µg/Kg-dry	1	6/15/2013 08:35 PM
Toluene	ND		36	µg/Kg-dry	1	6/15/2013 08:35 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	6/15/2013 08:35 PM
Surr: 1,2-Dichloroethane-d4	95.0		70-130	%REC	1	6/15/2013 08:35 PM
Surr: 4-Bromofluorobenzene	103		70-130	%REC	1	6/15/2013 08:35 PM
Surr: Dibromofluoromethane	90.1		70-130	%REC	1	6/15/2013 08:35 PM
Surr: Toluene-d8	89.4		70-130	%REC	1	6/15/2013 08:35 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: 6/17/2013	Analyst: JB
Electrical Conductivity @ Saturation	3.1		0.025	mmhos/cm @25	5	6/19/2013 12:30 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: MB
Chromium, Trivalent	13		0.61	mg/Kg-dry	1	6/19/2013 11:50 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 6/17/2013	Analyst: MB
Chromium, Hexavalent	ND		0.60	mg/Kg-dry	1	6/18/2013 12:10 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: BD
Moisture	17		0.050	% of sample	1	6/17/2013 02:00 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: CH
pH	9.0			s.u.	1	6/17/2013 09:00 AM

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

Client: HRL Compliance Solutions

# QC BATCH REPORT

Work Order: 1306630

Project: PDC Parachute Creek 9 13-199-1 6/14/13

Batch ID: 49098

Instrument ID GC8

Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-49098-49098</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 10:09 PM</b>		
Client ID:		Run ID: <b>GC8_130617A</b>				SeqNo: <b>2353203</b>		Prep Date: <b>6/17/2013</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	4.2								
Surr: 4-Terphenyl-d14	0.816	0	1.667	0	49	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-49098-49098</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 10:40 PM</b>		
Client ID:		Run ID: <b>GC8_130617A</b>				SeqNo: <b>2353204</b>		Prep Date: <b>6/17/2013</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)	155.5	4.2	166.7	0	93.3	49-124	0			
Surr: 4-Terphenyl-d14	0.887	0	1.667	0	53.2	39-115	0			

<b>MS</b>		Sample ID: <b>1306623-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 10:37 AM</b>		
Client ID:		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355664</b>		Prep Date: <b>6/17/2013</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)	476.9	12	464.9	53.65	91.1	49-130	0			
Surr: 4-Terphenyl-d14	2.861	0	4.649	0	61.5	39-115	0			

<b>MSD</b>		Sample ID: <b>1306623-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 11:07 AM</b>		
Client ID:		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355666</b>		Prep Date: <b>6/17/2013</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)	472.3	12	464	53.65	90.2	49-130	476.9	0.965	30	
Surr: 4-Terphenyl-d14	2.845	0	4.64	0	61.3	39-115	2.861	0.544	30	

The following samples were analyzed in this batch: | 1306630-01B | 1306630-02B | 1306630-03B |



**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **R122346**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>GBLK1-130617-R122346</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/17/2013 01:16 PM</b>		
Client ID:		Run ID: <b>GC10_130617A</b>				SeqNo: <b>2351902</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
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>109.4</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>109</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>GLCS1-130617-R122346</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/17/2013 12:51 PM</b>		
Client ID:		Run ID: <b>GC10_130617A</b>				SeqNo: <b>2351901</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
GRO (C6-C10)	8671	200	10000	0	86.7	70-130	0			
<i>Surr: Toluene-d8</i>	<i>113.8</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>114</i>	<i>70-130</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>1306583-03A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/17/2013 09:53 PM</b>		
Client ID:		Run ID: <b>GC10_130617A</b>				SeqNo: <b>2352304</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
GRO (C6-C10)	9355	200	10000	0	93.6	70-130	0			
<i>Surr: Toluene-d8</i>	<i>113.5</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>113</i>	<i>70-130</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>1306583-03A MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/17/2013 10:18 PM</b>		
Client ID:		Run ID: <b>GC10_130617A</b>				SeqNo: <b>2352306</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
GRO (C6-C10)	8926	200	10000	0	89.3	70-130	9355	4.7	30	
<i>Surr: Toluene-d8</i>	<i>111.7</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>112</i>	<i>70-130</i>	<i>113.5</i>	<i>1.59</i>	<i>30</i>	

The following samples were analyzed in this batch:

1306630-01A	1306630-02A	1306630-03A
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49102**      Instrument ID **HG1**      Method: **SW7471**

<b>MBLK</b>	Sample ID: <b>MBLK-49102-49102</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 02:54 PM</b>		
Client ID:	Run ID: <b>HG1_130617A</b>				SeqNo: <b>2351439</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      ND      0.020

<b>LCS</b>	Sample ID: <b>LCS-49102-49102</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 02:56 PM</b>		
Client ID:	Run ID: <b>HG1_130617A</b>				SeqNo: <b>2351440</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1787      0.020      0.1665      0      107      80-120      0

<b>MS</b>	Sample ID: <b>1306533-04CMS</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 03:40 PM</b>		
Client ID:	Run ID: <b>HG1_130617A</b>				SeqNo: <b>2351811</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1133      0.013      0.1055      0.011      96.9      75-125      0

<b>MSD</b>	Sample ID: <b>1306533-04CMSD</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 03:42 PM</b>		
Client ID:	Run ID: <b>HG1_130617A</b>				SeqNo: <b>2351812</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1221      0.013      0.1117      0.011      99.4      75-125      0.1133      7.51      35

The following samples were analyzed in this batch:

1306630-01B	1306630-02B	1306630-03B
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49120**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-49120-49120</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 05:01 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130617A</b>				SeqNo: <b>2352112</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Chromium	ND	0.25								
Copper	ND	0.25								
Selenium	0.0355	0.25								J

<b>MBLK</b>		Sample ID: <b>MBLK-49120-49120</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 04:02 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130618A</b>				SeqNo: <b>2353342</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	ND	0.25								
Cadmium	ND	0.10								
Lead	0.01014	0.25								J
Nickel	ND	0.25								
Silver	ND	0.25								
Zinc	0.4819	0.50								J

<b>LCS</b>		Sample ID: <b>LCS-49120-49120</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/17/2013 05:07 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130617A</b>				SeqNo: <b>2352113</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.41	0.25	5	0	88.2	80-120	0			
Chromium	4.672	0.25	5	0	93.4	80-120	0			
Copper	4.577	0.25	5	0	91.5	80-120	0			
Selenium	4.19	0.25	5	0	83.8	80-120	0			
Zinc	4.322	0.50	5	0	86.4	80-120	0			

<b>LCS</b>		Sample ID: <b>LCS-49120-49120</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 04:26 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130618A</b>				SeqNo: <b>2353428</b>		Prep Date: <b>6/17/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	5.07	0.25	5	0	101	80-120	0			
Cadmium	4.925	0.10	5	0	98.5	80-120	0			
Lead	4.853	0.25	5	0	97.1	80-120	0			
Nickel	4.78	0.25	5	0	95.6	80-120	0			
Silver	5.28	0.25	5	0	106	80-120	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49120**      Instrument ID **ICPMS1**      Method: **SW6020A**

MS				Sample ID: 1306627-01AMS			Units: mg/Kg		Analysis Date: 6/17/2013 10:19 PM		
Client ID:			Run ID: ICPMS1_130617A			SeqNo: 2352162		Prep Date: 6/17/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	15.66	1.8	7.092	9.566	85.9	75-125	0				
Barium	277.8	1.8	7.092	263.3	205	75-125	0			SO	
Cadmium	7.117	0.71	7.092	0.4344	94.2	75-125	0				
Chromium	22.74	1.8	7.092	15.01	109	75-125	0				
Copper	22.91	1.8	7.092	15.07	110	75-125	0				
Nickel	21.95	1.8	7.092	14.59	104	75-125	0				
Selenium	7.262	1.8	7.092	0.8271	90.7	75-125	0				
Silver	6.826	1.8	7.092	0.06779	95.3	75-125	0				
Zinc	56.06	3.5	7.092	48.64	105	75-125	0			O	

MS				Sample ID: 1306627-01AMS				Units: mg/Kg			Analysis Date: 6/18/2013 05:01 PM			
Client ID:				Run ID: ICPMS1_130618A				SeqNo: 2353434			Prep Date: 6/17/2013		DF: 5	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Lead		17.84	1.8	7.092	10.89	98.1	75-125	0						

MSD				Sample ID: 1306627-01AMSD			Units: mg/Kg		Analysis Date: 6/17/2013 10:25 PM		
Client ID:			Run ID: ICPMS1_130617A			SeqNo: 2352163		Prep Date: 6/17/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	21.16	1.8	7.267	9.566	159	75-125	15.66	29.9	25	SR	
Barium	279.3	1.8	7.267	263.3	220	75-125	277.8	0.534	25	SO	
Cadmium	7.609	0.73	7.267	0.4344	98.7	75-125	7.117	6.68	25		
Chromium	25.39	1.8	7.267	15.01	143	75-125	22.74	11	25	S	
Copper	22.62	1.8	7.267	15.07	104	75-125	22.91	1.26	25		
Nickel	23.31	1.8	7.267	14.59	120	75-125	21.95	5.99	25		
Selenium	7.791	1.8	7.267	0.8271	95.8	75-125	7.262	7.02	25		
Silver	7.289	1.8	7.267	0.06779	99.4	75-125	6.826	6.56	25		
Zinc	56.98	3.6	7.267	48.64	115	75-125	56.06	1.62	25	O	

MSD				Sample ID: 1306627-01AMSD				Units: mg/Kg			Analysis Date: 6/18/2013 05:07 PM			
Client ID:				Run ID: ICPMS1_130618A				SeqNo: 2353435			Prep Date: 6/17/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Lead	19.56	1.8	7.267	10.89	119	75-125	17.84	9.18	25					

The following samples were analyzed in this batch:

1306630-01B      1306630-02B      1306630-03B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49153** Instrument ID **ICPMS2** Method: **SW6020A** (**Dissolve**)

<b>DUP</b>		Sample ID: <b>1306627-01ADUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>6/19/2013 12:47 PM</b>		
Client ID:		Run ID: <b>ICPMS2_130619A</b>				SeqNo: <b>2354306</b>		Prep Date: <b>6/17/2013</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	62.08	10	0	0	0	0-0	68.04	9.16		
Magnesium	39.64	4.0	0	0	0	0-0	42.26	6.4		
Sodium	1151	4.0	0	0	0	0-0	1184	2.76		

The following samples were analyzed in this batch:

1306630-01C	1306630-02C	1306630-03C
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49097**      Instrument ID **SVMS7**      Method: **SW8270**

MBLK		Sample ID: SBLKS1-49097-49097				Units: µg/Kg		Analysis Date: 6/17/2013 07:27 PM			
Client ID:			Run ID: SVMS7_130617A			SeqNo: 2352800		Prep Date: 6/17/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	ND	30									
Acenaphthylene	ND	30									
Anthracene	ND	30									
Benzo(a)anthracene	ND	30									
Benzo(a)pyrene	ND	30									
Benzo(b)fluoranthene	ND	30									
Benzo(g,h,i)perylene	ND	30									
Benzo(k)fluoranthene	ND	30									
Chrysene	ND	30									
Dibenzo(a,h)anthracene	ND	30									
Fluoranthene	ND	30									
Fluorene	ND	30									
Indeno(1,2,3-cd)pyrene	ND	30									
Naphthalene	ND	30									
Pyrene	ND	30									
Surr: 2-Fluorobiphenyl	1281	0	1667	0	76.9	12-100		0			
Surr: 4-Terphenyl-d14	1778	0	1667	0	107	25-137		0			
Surr: Nitrobenzene-d5	1032	0	1667	0	61.9	37-107		0			

LCS				Sample ID: SLCSS1-49097-49097			Units: µg/Kg		Analysis Date: 6/17/2013 07:50 PM		
Client ID:			Run ID: SVMS7_130617A			SeqNo: 2352801		Prep Date: 6/17/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	495.7	30	666.7	0	74.3	45-110	0				
Acenaphthylene	512	30	666.7	0	76.8	45-105	0				
Anthracene	550.7	30	666.7	0	82.6	55-105	0				
Benzo(a)anthracene	581	30	666.7	0	87.1	50-110	0				
Benzo(a)pyrene	612.7	30	666.7	0	91.9	50-110	0				
Benzo(b)fluoranthene	659.3	30	666.7	0	98.9	45-115	0				
Benzo(g,h,i)perylene	569.7	30	666.7	0	85.4	40-125	0				
Benzo(k)fluoranthene	636.7	30	666.7	0	95.5	45-115	0				
Chrysene	588.3	30	666.7	0	88.2	55-110	0				
Dibenzo(a,h)anthracene	622.7	30	666.7	0	93.4	40-125	0				
Fluoranthene	667	30	666.7	0	100	55-115	0				
Fluorene	555.3	30	666.7	0	83.3	50-110	0				
Indeno(1,2,3-cd)pyrene	630	30	666.7	0	94.5	40-120	0				
Naphthalene	498	30	666.7	0	74.7	40-105	0				
Pyrene	528.3	30	666.7	0	79.2	45-125	0				
Surr: 2-Fluorobiphenyl	1252	0	1667	0	75.1	12-100	0				
Surr: 4-Terphenyl-d14	1733	0	1667	0	104	25-137	0				
Surr: Nitrobenzene-d5	1079	0	1667	0	64.7	37-107	0				

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

# QC BATCH REPORT

Batch ID: **49097**      Instrument ID **SVMS7**      Method: **SW8270**

MS				Sample ID: 1306493-01A MS				Units: µg/Kg			Analysis Date: 6/17/2013 08:58 PM			
Client ID:				Run ID: SVMS7_130617A				SeqNo: 2352805			Prep Date: 6/17/2013		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Acenaphthene	1502	900	1990	0	75.5	45-110	0							
Acenaphthylene	1532	900	1990	0	77	45-105	0							
Anthracene	1691	900	1990	0	85	55-105	0							
Benzo(a)anthracene	1980	900	1990	385.2	80.1	50-110	0							
Benzo(a)pyrene	1940	900	1990	0	97.5	50-110	0							
Benzo(b)fluoranthene	1840	900	1990	128.4	86	45-115	0							
Benzo(g,h,i)perylene	2129	900	1990	0	107	40-125	0							
Benzo(k)fluoranthene	1811	900	1990	0	91	45-115	0							
Chrysene	1701	900	1990	0	85.5	55-110	0							
Dibenzo(a,h)anthracene	2218	900	1990	0	111	40-125	0							
Fluoranthene	2209	900	1990	256.8	98.1	55-115	0							
Fluorene	1592	900	1990	0	80	50-110	0							
Indeno(1,2,3-cd)pyrene	2099	900	1990	0	105	40-120	0							
Naphthalene	1383	900	1990	0	69.5	40-105	0							
Pyrene	1552	900	1990	138.3	71	45-125	0							
Surr: 2-Fluorobiphenyl	3432	0	4974	0	69	12-100	0							
Surr: 4-Terphenyl-d14	4526	0	4974	0	91	25-137	0							
Surr: Nitrobenzene-d5	3014	0	4974	0	60.6	37-107	0							

MSD				Sample ID: 1306493-01A MSD			Units: µg/Kg		Analysis Date: 6/17/2013 09:21 PM		
Client ID:			Run ID: SVMS7_130617A			SeqNo: 2352807		Prep Date: 6/17/2013		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1041	840	1876	0	55.5	45-110	1502	36.2	30	R	
Acenaphthylene	1041	840	1876	0	55.5	45-105	1532	38.1	30	R	
Anthracene	1370	840	1876	0	73	55-105	1691	21	30		
Benzo(a)anthracene	1717	840	1876	385.2	71	50-110	1980	14.2	30		
Benzo(a)pyrene	1651	840	1876	0	88	50-110	1940	16.1	30		
Benzo(b)fluoranthene	1707	840	1876	128.4	84.2	45-115	1840	7.49	30		
Benzo(g,h,i)perylene	1604	840	1876	0	85.5	40-125	2129	28.1	30		
Benzo(k)fluoranthene	1651	840	1876	0	88	45-115	1811	9.21	30		
Chrysene	1492	840	1876	0	79.5	55-110	1701	13.1	30		
Dibenzo(a,h)anthracene	1661	840	1876	0	88.5	40-125	2218	28.8	30		
Fluoranthene	1764	840	1876	256.8	80.3	55-115	2209	22.4	30		
Fluorene	1257	840	1876	0	67	50-110	1592	23.5	30		
Indeno(1,2,3-cd)pyrene	1614	840	1876	0	86	40-120	2099	26.1	30		
Naphthalene	825.6	840	1876	0	44	40-105	1383	0	30	J	
Pyrene	1351	840	1876	138.3	64.6	45-125	1552	13.8	30		
Surr: 2-Fluorobiphenyl	2289	0	4691	0	48.8	12-100	3432	40	40		
Surr: 4-Terphenyl-d14	4062	0	4691	0	86.6	25-137	4526	10.8	40		
Surr: Nitrobenzene-d5	1895	0	4691	0	40.4	37-107	3014	45.6	40	R	

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

---

Batch ID: **49097**      Instrument ID **SVMS7**      Method: **SW8270**

---

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

1306630-01B	1306630-02B	1306630-03B
-------------	-------------	-------------

---

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49088**      Instrument ID **VMS5**      Method: **SW8260**

<b>MBLK</b>		Sample ID: <b>MBLK1-49088-49088</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/15/2013 01:57 PM</b>		
Client ID:		Run ID: <b>VMS5_130615A</b>				SeqNo: <b>2350707</b>		Prep Date: <b>6/15/2013</b>		DF: <b>1</b>
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								
<i>Surr: 1,2-Dichloroethane-d4</i>										
<i>Surr: 4-Bromofluorobenzene</i>										
<i>Surr: Dibromofluoromethane</i>										
<i>Surr: Toluene-d8</i>										

<b>LCS</b>		Sample ID: <b>LCS1-49088-49088</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/15/2013 12:47 PM</b>		
Client ID:		Run ID: <b>VMS5_130615A</b>				SeqNo: <b>2350705</b>		Prep Date: <b>6/15/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	999.5	30	1000	0	100	75-125	0			
Ethylbenzene	945.5	30	1000	0	94.6	75-125	0			
m,p-Xylene	1910	60	2000	0	95.5	80-125	0			
o-Xylene	954.5	30	1000	0	95.4	75-125	0			
Toluene	918	30	1000	0	91.8	70-125	0			
Xylenes, Total	2864	90	3000	0	95.5	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>										
<i>Surr: 4-Bromofluorobenzene</i>										
<i>Surr: Dibromofluoromethane</i>										
<i>Surr: Toluene-d8</i>										

<b>MS</b>		Sample ID: <b>1306620-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/15/2013 09:22 PM</b>		
Client ID:		Run ID: <b>VMS5_130615A</b>				SeqNo: <b>2350750</b>		Prep Date: <b>6/15/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	967	30	1000	0	96.7	75-125	0			
Ethylbenzene	885	30	1000	0	88.5	75-125	0			
m,p-Xylene	1810	60	2000	0	90.5	80-125	0			
o-Xylene	909.5	30	1000	0	91	75-125	0			
Toluene	860	30	1000	0	86	70-125	0			
Xylenes, Total	2720	90	3000	0	90.7	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>										
<i>Surr: 4-Bromofluorobenzene</i>										
<i>Surr: Dibromofluoromethane</i>										
<i>Surr: Toluene-d8</i>										

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49088**      Instrument ID **VMS5**      Method: **SW8260**

<b>MSD</b>		Sample ID: <b>1306620-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/15/2013 09:45 PM</b>		
Client ID:		Run ID: <b>VMS5_130615A</b>				SeqNo: <b>2350752</b>		Prep Date: <b>6/15/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	955.5	30	1000	0	95.6	75-125	967	1.2	30	
Ethylbenzene	880.5	30	1000	0	88	75-125	885	0.51	30	
m,p-Xylene	1792	60	2000	0	89.6	80-125	1810	0.999	30	
o-Xylene	911	30	1000	0	91.1	75-125	909.5	0.165	30	
Toluene	847	30	1000	0	84.7	70-125	860	1.52	30	
Xylenes, Total	2704	90	3000	0	90.1	75-125	2720	0.608	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	935.5	0	1000	0	93.6	70-130	932.5	0.321	30	
<i>Surr: 4-Bromofluorobenzene</i>	1048	0	1000	0	105	70-130	1062	1.33	30	
<i>Surr: Dibromofluoromethane</i>	942.5	0	1000	0	94.2	70-130	921	2.31	30	
<i>Surr: Toluene-d8</i>	885	0	1000	0	88.5	70-130	889.5	0.507	30	

The following samples were analyzed in this batch:      1306630-01A      1306630-02A      1306630-03A     

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49151**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-49151-49151</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 12:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_130618E</b>				SeqNo: <b>2353043</b>		Prep Date: <b>6/17/2013</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      0.49

<b>LCS</b>		Sample ID: <b>LCS-49151-49151</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 12:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_130618E</b>				SeqNo: <b>2353042</b>		Prep Date: <b>6/17/2013</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      1.901      0.49      1.976      0      96.2      75-110      0

<b>MS</b>		Sample ID: <b>1306630-02B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 12:10 PM</b>		
Client ID: <b>South Wall, 9'</b>		Run ID: <b>WETCHEM_130618E</b>				SeqNo: <b>2353039</b>		Prep Date: <b>6/17/2013</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      1.669      0.50      1.992      0.1349      77      60-130      0

<b>MSD</b>		Sample ID: <b>1306630-02B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/18/2013 12:10 PM</b>		
Client ID: <b>South Wall, 9'</b>		Run ID: <b>WETCHEM_130618E</b>				SeqNo: <b>2353040</b>		Prep Date: <b>6/17/2013</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      1.69      0.49      1.961      0.1349      79.3      60-130      1.669      1.24      30

The following samples were analyzed in this batch:

1306630-01B	1306630-02B	1306630-03B
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **49153** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>1306627-01A DUP</b>				Units: <b>mmhos/cm @25°F</b>		Analysis Date: <b>6/19/2013 12:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_130619H</b>			SeqNo: <b>2354165</b>		Prep Date: <b>6/17/2013</b>		DF: <b>5</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	7.13	0.025	0	0	0		7.645	6.97	50	

The following samples were analyzed in this batch:

1306630-01C	1306630-02C	1306630-03C
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

## QC BATCH REPORT

Batch ID: **R122349**      Instrument ID **WETCHEM**      Method: **SW9045D**

<b>LCS</b>		Sample ID: <b>WLCSW1-130617-R122349</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/17/2013 09:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130617L</b>				SeqNo: <b>2351939</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
pH	4.23	0	4.4	0	96.1	90-110	0			

<b>DUP</b>		Sample ID: <b>1306571-01A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/17/2013 09:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130617L</b>				SeqNo: <b>2351942</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
pH	8.2	0	0	0	0	0-0	8.2	0	20	

<b>DUP</b>		Sample ID: <b>1306628-01B DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/17/2013 09:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130617L</b>				SeqNo: <b>2351949</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
pH	8.14	0	0	0	0	0-0	8.13	0.123	20	

The following samples were analyzed in this batch:

1306630-01B	1306630-02B	1306630-03B
-------------	-------------	-------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306630  
**Project:** PDC Parachute Creek 9 13-199-1 6/14/13

# QC BATCH REPORT

Batch ID: **R122372**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R122372</b>				Units: % of sample			Analysis Date: <b>6/17/2013 02:00 PM</b>		
Client ID:		Run ID: <b>MOIST_130617A</b>				SeqNo: <b>2352382</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-R122372</b>				Units: % of sample			Analysis Date: <b>6/17/2013 02:00 PM</b>		
Client ID:		Run ID: <b>MOIST_130617A</b>				SeqNo: <b>2352381</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>1306600-04A DUP</b>				Units: % of sample			Analysis Date: <b>6/17/2013 02:00 PM</b>		
Client ID:		Run ID: <b>MOIST_130617A</b>				SeqNo: <b>2352352</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      16.23      0.050      0      0      0      0-0      16.38      0.92      20

<b>DUP</b>		Sample ID: <b>1306623-04B DUP</b>				Units: % of sample			Analysis Date: <b>6/17/2013 02:00 PM</b>		
Client ID:		Run ID: <b>MOIST_130617A</b>				SeqNo: <b>2352374</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      15.83      0.050      0      0      0      0-0      15.71      0.761      20

The following samples were analyzed in this batch:

1306630-01B	1306630-02B	1306630-03B
-------------	-------------	-------------

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





[illegible]

\*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.**

For metals or anions, please detail analytes below.		QC PACKAGE (check below)	
Comments:	2.82	x	LEVEL II (Standard QC)
			LEVEL III (Std QC + forms)
			LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Casey Richardson	6/14/13	1815
RECEIVED BY		Diane F. Sher	6/15/13	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

# ALS Group USA, Corp

## Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **15-Jun-13 09:30**

Work Order: **1306630**

Received by: **DS**

Checklist completed by Diane Shaw 15-Jun-13  
eSignature Date

Reviewed by: Ann Preston 16-Jun-13  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/15/2013 10:48:24 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:

**FedEx** US Airbill  
Express

FedEx  
Tracking  
Number

8722 9438 1219

0200 Form  
ID No.

FedEx Retrieval Copy

1 From Date 6-14-13 Sender's FedEx Account Number

Sender's Name CASEY RICHARDSON Phone 970 213-3277

Company UCSI

Address 2285 FLZ RD Dept./Floor/Suite/Room

City GRAND SCT State CO ZIP 81503

2 Your Internal Billing Reference

3 To Recipient's Name SAFFR GELFING Phone 616 394-0000

Company ALS ENVIRONMENTAL

Address 3352 128th We cannot deliver to P.O. boxes or P.D. ZIP codes. Dept./Floor/Suite/Room 01 HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight

Address Use this line for the HOLD location address or for continuation of your shipping address. 31 HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations. City VILCAND State MI ZIP 49424

Signature: [Signature] Date: 6-14-13

4a Express Package Service  
01 FedEx Priority Overnight Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
03 FedEx 2Day Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
05 FedEx Standard Overnight Next business afternoon. Saturday Delivery NOT available.  
06 FedEx First Overnight Earliest next business morning delivery to select locations.  
20 FedEx Express Saver Third business day. Saturday Delivery NOT available.

4b Express Freight Service  
70 FedEx 1Day Freight Next business day. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.  
80 FedEx 2Day Freight Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
83 FedEx 3Day Freight Third business day. Saturday Delivery NOT available.

5 Packaging  
06 FedEx Envelope\* 02 FedEx Pak\* Includes FedEx Small Pak and FedEx Large Pak. 03 FedEx Box 04 FedEx Tube 01 Other

6 Special Handling and Delivery Signature Options  
03 SATURDAY DELIVERY

No Signature Required Package may be left without obtaining a signature for delivery.  
10 Direct Signature Someone at recipient's address may sign for delivery. Fee applies.  
34 Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.  
Does this shipment contain dangerous goods?  
One box must be checked.  
04 Yes As per attached Shipper's Declaration. 06 Dry Ice Dry ice, 9, UN 1845 x kg  
No 04 No Shipper's Declaration not required.  
Cargo Aircraft Only  
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:  
1 Sender Acct. No. in Section 1 will be billed. 2 Recipient 3 Third Party 4 Credit Card 5 Cash/Check  
Enter FedEx Acct. No. or Credit Card No. below.  
Total Packages Total Weight lbs. Credit Card Auth: 909  
\*Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

Rev. Date 2/10 • Part #158280 • ©1994-2010 FedEx • PRINTED IN U.S.A. SRY

fedex.com 1800.GoFedEx 1800.463.3339

fedex.com 1800.GoFedEx 1800.463.3339

ALS Environmental  
10450 Stancin Rd., Suite 210  
Date: 6/14/13  
Time: 10:11 AM  
CUSTODY SEAL



30-Jun-2013

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

Re: **PDC Parachute Creek 9 13-199-1 6/21/13**

Work Order: **1306940**

Dear Herman,

ALS Environmental received 1 sample on 24-Jun-2013 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 24.

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 Group An ALS Limited Company

Environmental 

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

RIGHT SOLUTIONS RIGHT PARTNER

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13  
**Work Order:** 1306940

**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>
1306940-01	Excavation Footprint, 17'	Soil		6/21/2013 14:05	6/24/2013 09:30	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13  
**Work Order:** 1306940

---

**Case Narrative**

Batch 49274 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 49254 MS/MSD data for PAHs is not related to this project's samples. No data requires qualification.

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13  
**WorkOrder:** 1306940

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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°F	Microhms-Centimeter at 25 Degrees Fahrenheit
none	
s.u.	Standard Units



# ALS Group USA, Corp

Date: 30-Jun-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/21/13

Sample ID: Excavation Footprint, 17'

Collection Date: 6/21/2013 02:05 PM

Work Order: 1306940

Lab ID: 1306940-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>100</b>		<b>SW8015M</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>RD</b>
			<b>4.7</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/25/2013 07:30 AM
Surr: 4-Terphenyl-d14	41.8		39-115	%REC	1	6/25/2013 07:30 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>48</b>		<b>SW8015</b>			Analyst: <b>RD</b>
			<b>2.8</b>	<b>mg/Kg-dry</b>	<b>50</b>	6/24/2013 05:48 PM
Surr: Toluene-d8	99.2		50-150	%REC	50	6/24/2013 05:48 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.022</b>		<b>SW7471</b>		Prep Date: <b>6/25/2013</b>	Analyst: <b>LR</b>
			<b>0.017</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/25/2013 02:08 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>14</b>		<b>SW6020A</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>ML</b>
			<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
<b>Barium</b>	<b>560</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
Cadmium	ND		0.78	mg/Kg-dry	5	6/25/2013 03:28 AM
<b>Chromium</b>	<b>14</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
<b>Copper</b>	<b>21</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
<b>Lead</b>	<b>17</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
<b>Nickel</b>	<b>20</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
Selenium	ND		2.0	mg/Kg-dry	5	6/25/2013 03:28 AM
Silver	ND		2.0	mg/Kg-dry	5	6/25/2013 03:28 AM
<b>Zinc</b>	<b>69</b>		<b>3.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	6/25/2013 03:28 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>60</b>		<b>SW6020A</b>		Prep Date: <b>6/28/2013</b>	Analyst: <b>ML</b>
			<b>10</b>	<b>mg/L</b>	<b>20</b>	6/28/2013 03:44 PM
<b>Magnesium</b>	<b>52</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	6/28/2013 03:44 PM
<b>Sodium</b>	<b>170</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	6/28/2013 03:44 PM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>3.9</b>		<b>USDA H60 METHO</b>		Prep Date: <b>6/28/2013</b>	Analyst: <b>ML</b>
			<b>0.010</b>	<b>none</b>	<b>1</b>	6/28/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>HL</b>
			<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Acenaphthylene</b>	<b>ND</b>		<b>34</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Anthracene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>19</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>19</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>32</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Chrysene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/25/2013 02:21 PM

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

# ALS Group USA, Corp

Date: 30-Jun-13

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13  
**Sample ID:** Excavation Footprint, 17'  
**Collection Date:** 6/21/2013 02:05 PM

**Work Order:** 1306940  
**Lab ID:** 1306940-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		17	µg/Kg-dry	1	6/25/2013 02:21 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	6/25/2013 02:21 PM
<b>Naphthalene</b>	<b>59</b>		<b>17</b>	<b>µg/Kg-dry</b>	1	6/25/2013 02:21 PM
Pyrene	ND		17	µg/Kg-dry	1	6/25/2013 02:21 PM
Surr: 2-Fluorobiphenyl	67.8		12-100	%REC	1	6/25/2013 02:21 PM
Surr: 4-Terphenyl-d14	88.1		25-137	%REC	1	6/25/2013 02:21 PM
Surr: Nitrobenzene-d5	64.7		37-107	%REC	1	6/25/2013 02:21 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>AK</b>
Benzene	ND		34	µg/Kg-dry	1	6/24/2013 06:42 PM
<b>Ethylbenzene</b>	<b>83</b>		<b>34</b>	<b>µg/Kg-dry</b>	1	6/24/2013 06:42 PM
<b>m,p-Xylene</b>	<b>1,400</b>		<b>68</b>	<b>µg/Kg-dry</b>	1	6/24/2013 06:42 PM
<b>o-Xylene</b>	<b>250</b>		<b>34</b>	<b>µg/Kg-dry</b>	1	6/24/2013 06:42 PM
Toluene	ND		34	µg/Kg-dry	1	6/24/2013 06:42 PM
<b>Xylenes, Total</b>	<b>1,600</b>		<b>100</b>	<b>µg/Kg-dry</b>	1	6/24/2013 06:42 PM
Surr: 1,2-Dichloroethane-d4	92.1		70-130	%REC	1	6/24/2013 06:42 PM
Surr: 4-Bromofluorobenzene	98.8		70-130	%REC	1	6/24/2013 06:42 PM
Surr: Dibromofluoromethane	94.8		70-130	%REC	1	6/24/2013 06:42 PM
Surr: Toluene-d8	95.4		70-130	%REC	1	6/24/2013 06:42 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: <b>6/28/2013</b>	Analyst: <b>KF</b>
Electrical Conductivity @ Saturation	1.8		0.25	mmhos/cm @2	50	6/28/2013 02:55 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	14		0.57	mg/Kg-dry	1	6/26/2013 10:25 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	6/24/2013 11:00 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	12		0.050	% of sample	1	6/24/2013 02:00 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>CH</b>
pH	9.3			s.u.	1	6/24/2013 01:09 PM

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

# ALS Group USA, Corp

Date: 30-Jun-13

**Client:** HRL Compliance Solutions

**Work Order:** 1306940

**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49255**

Instrument ID **GC8**

Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>DBLKS1-49255-49255</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 04:30 AM</b>		
Client ID:		Run ID: <b>GC8_130624B</b>				SeqNo: <b>2360720</b>		Prep Date: <b>6/24/2013</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	4.2								
<i>Surr: 4-Terphenyl-d14</i>	<i>0.7913</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>47.5</i>	<i>39-115</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>DLCSS1-49255-49255</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 05:00 AM</b>		
Client ID:		Run ID: <b>GC8_130624B</b>				SeqNo: <b>2360721</b>		Prep Date: <b>6/24/2013</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)	147.8	4.2	166.7	0	88.7	49-124	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>0.7633</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>45.8</i>	<i>39-115</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>1306842-09A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 05:30 AM</b>		
Client ID:		Run ID: <b>GC8_130624B</b>				SeqNo: <b>2360722</b>		Prep Date: <b>6/24/2013</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)	491.1	12	487.3	99.58	80.4	49-130	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>2.559</i>	<i>0</i>	<i>4.873</i>	<i>0</i>	<i>52.5</i>	<i>39-115</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>1306842-09A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 06:00 AM</b>		
Client ID:		Run ID: <b>GC8_130624B</b>				SeqNo: <b>2360723</b>		Prep Date: <b>6/24/2013</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)	534.8	12	478.9	99.58	90.9	49-130	491.1	8.51	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>2.802</i>	<i>0</i>	<i>4.789</i>	<i>0</i>	<i>58.5</i>	<i>39-115</i>	<i>2.559</i>	<i>9.07</i>	<i>30</i>	

The following samples were analyzed in this batch: | 1306940-01B |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **R122726**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>GBLK1-130624-R122726</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/24/2013 01:11 PM</b>		
Client ID:		Run ID: <b>GC10_130624A</b>				SeqNo: <b>2359366</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
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>104.9</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>105</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>GLCS1-130624-R122726</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/24/2013 12:46 PM</b>		
Client ID:		Run ID: <b>GC10_130624A</b>				SeqNo: <b>2359365</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
GRO (C6-C10)	8260	200	10000	0	82.6	70-130	0			
<i>Surr: Toluene-d8</i>	<i>112.2</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>112</i>	<i>70-130</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>1306858-03A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/24/2013 09:54 PM</b>		
Client ID:		Run ID: <b>GC10_130624A</b>				SeqNo: <b>2359375</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
GRO (C6-C10)	8713	200	10000	0	87.1	70-130	0			
<i>Surr: Toluene-d8</i>	<i>110.9</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>111</i>	<i>70-130</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>1306858-03A MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/24/2013 10:18 PM</b>		
Client ID:		Run ID: <b>GC10_130624A</b>				SeqNo: <b>2359376</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
GRO (C6-C10)	8231	200	10000	0	82.3	70-130	8713	5.69	30	
<i>Surr: Toluene-d8</i>	<i>109.3</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>109</i>	<i>70-130</i>	<i>110.9</i>	<i>1.43</i>	<i>30</i>	

The following samples were analyzed in this batch:

1306940-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49298**      Instrument ID **HG1**      Method: **SW7471**

<b>MBLK</b>		Sample ID: <b>MBLK-49298-49298</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:02 PM</b>		
Client ID:		Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360223</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      ND      0.020

<b>LCS</b>		Sample ID: <b>LCS-49298-49298</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:04 PM</b>		
Client ID:		Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360225</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1778      0.020      0.1665      0      107      80-120      0

<b>MS</b>		Sample ID: <b>1306940-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:10 PM</b>		
Client ID: <b>Excavation Footprint, 17'</b>		Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360230</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1278      0.014      0.1207      0.01978      89.6      75-125      0

<b>MSD</b>		Sample ID: <b>1306940-01BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:12 PM</b>		
Client ID: <b>Excavation Footprint, 17'</b>		Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360232</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1151      0.014      0.1129      0.01978      84.4      75-125      0.1278      10.5      35

The following samples were analyzed in this batch:

1306940-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

# QC BATCH REPORT

Batch ID: **49274** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: <b>MBLK-49274-49274</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 01:42 AM</b>				
Client ID:		Run ID: <b>ICPMS1_130624A</b>		SeqNo: <b>2359206</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	0.0721	0.25								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	0.0337	0.25								J
Silver	ND	0.25								
Zinc	0.05715	0.50								J

LCS Sample ID: <b>LCS-49274-49274</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 01:48 AM</b>				
Client ID:		Run ID: <b>ICPMS1_130624A</b>		SeqNo: <b>2359207</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.468	0.25	5	0	89.4	80-120	0			
Barium	5.01	0.25	5	0	100	80-120	0			
Cadmium	4.89	0.10	5	0	97.8	80-120	0			
Chromium	4.724	0.25	5	0	94.5	80-120	0			
Copper	4.662	0.25	5	0	93.2	80-120	0			
Lead	5.35	0.25	5	0	107	80-120	0			
Nickel	4.707	0.25	5	0	94.1	80-120	0			
Selenium	4.252	0.25	5	0	85	80-120	0			
Silver	5.775	0.25	5	0	116	80-120	0			
Zinc	4.507	0.50	5	0	90.1	80-120	0			

MS Sample ID: <b>1306943-05CMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 04:09 AM</b>				
Client ID:		Run ID: <b>ICPMS1_130624A</b>		SeqNo: <b>2359244</b>		Prep Date: <b>6/24/2013</b>		DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.08	3.5	6.964	6.603	107	75-125	0			
Barium	18.03	3.5	6.964	11.86	88.5	75-125	0			
Cadmium	7.563	1.4	6.964	0.385	103	75-125	0			
Chromium	12.52	3.5	6.964	4.803	111	75-125	0			
Copper	22.49	3.5	6.964	14.4	116	75-125	0			
Lead	23.22	3.5	6.964	35.85	-181	75-125	0			SO
Nickel	17.15	3.5	6.964	10.13	101	75-125	0			
Selenium	7.423	3.5	6.964	1.22	89.1	75-125	0			
Silver	8.113	3.5	6.964	0.03892	116	75-125	0			
Zinc	79.32	7.0	6.964	62.71	238	75-125	0			SO

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49274** Instrument ID **ICPMS1** Method: **SW6020A**

MSD				Sample ID: 1306943-05CMSD			Units: mg/Kg		Analysis Date: 6/25/2013 04:15 AM		
Client ID:			Run ID: ICPMS1_130624A			SeqNo: 2359245		Prep Date: 6/24/2013		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	16.73	3.6	7.123	6.603	142	75-125	14.08	17.2	25	S	
Barium	15.79	3.6	7.123	11.86	55.1	75-125	18.03	13.2	25	S	
Cadmium	7.585	1.4	7.123	0.385	101	75-125	7.563	0.301	25		
Chromium	12.66	3.6	7.123	4.803	110	75-125	12.52	1.08	25		
Copper	22.02	3.6	7.123	14.4	107	75-125	22.49	2.08	25		
Lead	27.21	3.6	7.123	35.85	-121	75-125	23.22	15.8	25	SO	
Nickel	17.14	3.6	7.123	10.13	98.5	75-125	17.15	0.0463	25		
Selenium	7.671	3.6	7.123	1.22	90.6	75-125	7.423	3.28	25		
Silver	7.906	3.6	7.123	0.03892	110	75-125	8.113	2.58	25		
Zinc	73.86	7.1	7.123	62.71	157	75-125	79.32	7.13	25	SO	

The following samples were analyzed in this batch: | 1306940-01B |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

# QC BATCH REPORT

Batch ID: **49254**      Instrument ID **SVMS4**      Method: **SW8270**

MBLK Sample ID: <b>SBLKS1-49254-49254</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>6/25/2013 10:38 AM</b>			
Client ID:		Run ID: <b>SVMS4_130625A</b>		SeqNo: <b>2360453</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Acenaphthylene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
<i>Surr: 2-Fluorobiphenyl</i>	<i>1123</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>67.4</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>1580</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>94.8</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>1095</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>65.7</i>	<i>37-107</i>	<i>0</i>			

LCS Sample ID: <b>SLCSS1-49254-49254</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>6/25/2013 10:07 AM</b>			
Client ID:		Run ID: <b>SVMS4_130625A</b>		SeqNo: <b>2360451</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	608	30	666.7	0	91.2	45-110	0			
Acenaphthylene	618.3	30	666.7	0	92.7	45-105	0			
Anthracene	596.3	30	666.7	0	89.4	55-105	0			
Benzo(a)anthracene	595	30	666.7	0	89.2	50-110	0			
Benzo(a)pyrene	650.3	30	666.7	0	97.5	50-110	0			
Benzo(b)fluoranthene	620.7	30	666.7	0	93.1	45-115	0			
Benzo(g,h,i)perylene	605	30	666.7	0	90.7	40-125	0			
Benzo(k)fluoranthene	675	30	666.7	0	101	45-115	0			
Chrysene	663.7	30	666.7	0	99.5	55-110	0			
Dibenzo(a,h)anthracene	587.3	30	666.7	0	88.1	40-125	0			
Fluoranthene	596.3	30	666.7	0	89.4	55-115	0			
Fluorene	593.7	30	666.7	0	89	50-110	0			
Indeno(1,2,3-cd)pyrene	592	30	666.7	0	88.8	40-120	0			
Naphthalene	585	30	666.7	0	87.7	40-105	0			
Pyrene	647.7	30	666.7	0	97.1	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	<i>1362</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>81.7</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>1805</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>108</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>1320</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>79.2</i>	<i>37-107</i>	<i>0</i>			

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

# QC BATCH REPORT

Batch ID: **49254**      Instrument ID **SVMS4**      Method: **SW8270**

MS				Sample ID: <b>1306943-07C MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2013 11:10 AM</b>	
Client ID:				Run ID: <b>SVMS4_130625A</b>			SeqNo: <b>2360456</b>		Prep Date: <b>6/24/2013</b>	
							DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1014	57	1261	0	80.4	45-110	0			
Acenaphthylene	1009	57	1261	0	80	45-105	0			
Anthracene	1050	57	1261	0	83.3	55-105	0			
Benzo(a)anthracene	1063	57	1261	17.5	83	50-110	0			
Benzo(a)pyrene	1123	57	1261	0	89.1	50-110	0			
Benzo(b)fluoranthene	1126	57	1261	28.39	87	45-115	0			
Benzo(g,h,i)perylene	1072	57	1261	0	85	40-125	0			
Benzo(k)fluoranthene	1095	57	1261	0	86.8	45-115	0			
Chrysene	1126	57	1261	20.47	87.7	55-110	0			
Dibenzo(a,h)anthracene	1066	57	1261	0	84.5	40-125	0			
Fluoranthene	1114	57	1261	24.76	86.4	55-115	0			
Fluorene	975.8	57	1261	0	77.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1048	57	1261	0	83.1	40-120	0			
Naphthalene	915.9	57	1261	0	72.6	40-105	0			
Pyrene	1095	57	1261	30.7	84.4	45-125	0			
Surr: 2-Fluorobiphenyl	1.261	0	3152	0	0.04	12-100	0			S
Surr: 4-Terphenyl-d14	5.043	0	3152	0	0.16	25-137	0			S
Surr: Nitrobenzene-d5	81.95	0	3152	0	2.6	37-107	0			S

MS				Sample ID: <b>1306842-09A MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2013 12:13 PM</b>	
Client ID:				Run ID: <b>SVMS4_130625A</b>			SeqNo: <b>2360461</b>		Prep Date: <b>6/24/2013</b>	
							DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1619	85	1881	0	86	45-110	0			
Acenaphthylene	1672	85	1881	0	88.9	45-105	0			
Anthracene	1728	85	1881	0	91.8	55-105	0			
Benzo(a)anthracene	1872	85	1881	124	92.9	50-110	0			
Benzo(a)pyrene	2027	85	1881	163.1	99.1	50-110	0			
Benzo(b)fluoranthene	2109	85	1881	249	98.9	45-115	0			
Benzo(g,h,i)perylene	1484	85	1881	106.4	73.2	40-125	0			
Benzo(k)fluoranthene	2075	85	1881	86.91	106	45-115	0			
Chrysene	2073	85	1881	185.5	100	55-110	0			
Dibenzo(a,h)anthracene	1474	85	1881	0	78.3	40-125	0			
Fluoranthene	2067	85	1881	225.6	97.9	55-115	0			
Fluorene	1663	85	1881	0	88.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1513	85	1881	74.21	76.5	40-120	0			
Naphthalene	1446	85	1881	0	76.8	40-105	0			
Pyrene	2035	85	1881	218.7	96.5	45-125	0			
Surr: 2-Fluorobiphenyl	3510	0	4703	0	74.6	12-100	0			
Surr: 4-Terphenyl-d14	4716	0	4703	0	100	25-137	0			
Surr: Nitrobenzene-d5	3131	0	4703	0	66.6	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

# QC BATCH REPORT

Batch ID: **49254**      Instrument ID **SVMS4**      Method: **SW8270**

MSD				Sample ID: 1306943-07C MSD				Units: µg/Kg		Analysis Date: 6/25/2013 11:42 AM	
Client ID:			Run ID: SVMS4_130625A			SeqNo: 2360458		Prep Date: 6/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	987.7	59	1314	0	75.1	45-110	1014	2.59	30		
Acenaphthylene	970.6	59	1314	0	73.8	45-105	1009	3.9	30		
Anthracene	1030	59	1314	0	78.4	55-105	1050	1.9	30		
Benzo(a)anthracene	1042	59	1314	17.5	78	50-110	1063	2.01	30		
Benzo(a)pyrene	1095	59	1314	0	83.3	50-110	1123	2.57	30		
Benzo(b)fluoranthene	1080	59	1314	28.39	80	45-115	1126	4.18	30		
Benzo(g,h,i)perylene	1015	59	1314	0	77.2	40-125	1072	5.45	30		
Benzo(k)fluoranthene	1089	59	1314	0	82.8	45-115	1095	0.551	30		
Chrysene	1128	59	1314	20.47	84.2	55-110	1126	0.166	30		
Dibenzo(a,h)anthracene	1003	59	1314	0	76.3	40-125	1066	6.1	30		
Fluoranthene	1097	59	1314	24.76	81.6	55-115	1114	1.48	30		
Fluorene	964.1	59	1314	0	73.3	50-110	975.8	1.21	30		
Indeno(1,2,3-cd)pyrene	994.3	59	1314	0	75.6	40-120	1048	5.23	30		
Naphthalene	849.7	59	1314	0	64.6	40-105	915.9	7.5	30		
Pyrene	1105	59	1314	30.7	81.7	45-125	1095	0.887	30		
Surr: 2-Fluorobiphenyl	2133	0	3286	0	64.9	12-100	1.261	200	40	R	
Surr: 4-Terphenyl-d14	2863	0	3286	0	87.1	25-137	5.043	199	40	R	
Surr: Nitrobenzene-d5	1949	0	3286	0	59.3	37-107	81.95	184	40	R	

MSD				Sample ID: 1306842-09A MSD			Units: µg/Kg		Analysis Date: 6/25/2013 12:45 PM		
Client ID:			Run ID: SVMS4_130625A			SeqNo: 2360462		Prep Date: 6/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1618	90	1993	0	81.2	45-110	1619	0.0617	30		
Acenaphthylene	1658	90	1993	0	83.2	45-105	1672	0.887	30		
Anthracene	1723	90	1993	0	86.5	55-105	1728	0.262	30		
Benzo(a)anthracene	1800	90	1993	124	84.1	50-110	1872	3.91	30		
Benzo(a)pyrene	1990	90	1993	163.1	91.7	50-110	2027	1.82	30		
Benzo(b)fluoranthene	2119	90	1993	249	93.8	45-115	2109	0.474	30		
Benzo(g,h,i)perylene	1382	90	1993	106.4	64	40-125	1484	7.16	30		
Benzo(k)fluoranthene	1976	90	1993	86.91	94.8	45-115	2075	4.87	30		
Chrysene	1993	90	1993	185.5	90.7	55-110	2073	3.92	30		
Dibenzo(a,h)anthracene	1412	90	1993	0	70.8	40-125	1474	4.32	30		
Fluoranthene	2033	90	1993	225.6	90.7	55-115	2067	1.63	30		
Fluorene	1634	90	1993	0	82	50-110	1663	1.78	30		
Indeno(1,2,3-cd)pyrene	1433	90	1993	74.21	68.2	40-120	1513	5.49	30		
Naphthalene	1421	90	1993	0	71.3	40-105	1446	1.76	30		
Pyrene	1963	90	1993	218.7	87.5	45-125	2035	3.61	30		
Surr: 2-Fluorobiphenyl	3403	0	4981	0	68.3	12-100	3510	3.11	40		
Surr: 4-Terphenyl-d14	4473	0	4981	0	89.8	25-137	4716	5.3	40		
Surr: Nitrobenzene-d5	3079	0	4981	0	61.8	37-107	3131	1.68	40		

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

---

Batch ID: **49254** Instrument ID **SVMS4** Method: **SW8270**

---

The following samples were analyzed in this batch:

1306940-01B
-------------

---

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

# QC BATCH REPORT

Batch ID: **49262**      Instrument ID **VMS5**      Method: **SW8260**

<b>MBLK</b>		Sample ID: <b>MBLK-49262-49262</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/24/2013 02:36 PM</b>		
Client ID:		Run ID: <b>VMS5_130624A</b>				SeqNo: <b>2359508</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>
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	950	0	1000	0	95	70-130	0			
Surr: 4-Bromofluorobenzene	1056	0	1000	0	106	70-130	0			
Surr: Dibromofluoromethane	962.5	0	1000	0	96.2	70-130	0			
Surr: Toluene-d8	1018	0	1000	0	102	70-130	0			

<b>LCS</b>		Sample ID: <b>LCS1-49262-49262</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/24/2013 01:25 PM</b>		
Client ID:		Run ID: <b>VMS5_130624A</b>				SeqNo: <b>2359507</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	976.5	30	1000	0	97.6	75-125	0			
Ethylbenzene	910.5	30	1000	0	91	75-125	0			
m,p-Xylene	1844	60	2000	0	92.2	80-125	0			
o-Xylene	938.5	30	1000	0	93.8	75-125	0			
Toluene	929.5	30	1000	0	93	70-125	0			
Xylenes, Total	2782	90	3000	0	92.8	75-125	0			
Surr: 1,2-Dichloroethane-d4	939	0	1000	0	93.9	70-130	0			
Surr: 4-Bromofluorobenzene	1066	0	1000	0	107	70-130	0			
Surr: Dibromofluoromethane	973.5	0	1000	0	97.4	70-130	0			
Surr: Toluene-d8	1012	0	1000	0	101	70-130	0			

<b>MS</b>		Sample ID: <b>1306888-15A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/26/2013 10:49 PM</b>		
Client ID:		Run ID: <b>VMS8_130626A</b>				SeqNo: <b>2362692</b>		Prep Date: <b>6/24/2013</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	92650	3,000	100000	0	92.6	75-125	0			
Ethylbenzene	94950	3,000	100000	0	95	75-125	0			
m,p-Xylene	185400	6,000	200000	0	92.7	80-125	0			
o-Xylene	93150	3,000	100000	0	93.2	75-125	0			
Toluene	91700	3,000	100000	0	91.7	70-125	0			
Xylenes, Total	278600	9,000	300000	0	92.9	75-125	0			
Surr: 1,2-Dichloroethane-d4	100000	0	100000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	98000	0	100000	0	98	70-130	0			
Surr: Dibromofluoromethane	105800	0	100000	0	106	70-130	0			
Surr: Toluene-d8	101800	0	100000	0	102	70-130	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49262**      Instrument ID **VMS5**      Method: **SW8260**

MSD				Sample ID: <b>1306888-15A MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/26/2013 11:13 PM</b>	
Client ID:				Run ID: <b>VMS8_130626A</b>			SeqNo: <b>2362696</b>		Prep Date: <b>6/24/2013</b>	
							DF: <b>100</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	91400	3,000	100000	0	91.4	75-125	92650	1.36	30	
Ethylbenzene	92550	3,000	100000	0	92.6	75-125	94950	2.56	30	
m,p-Xylene	180600	6,000	200000	0	90.3	80-125	185400	2.65	30	
o-Xylene	92750	3,000	100000	0	92.8	75-125	93150	0.43	30	
Toluene	88800	3,000	100000	0	88.8	70-125	91700	3.21	30	
Xylenes, Total	273400	9,000	300000	0	91.1	75-125	278600	1.9	30	
Surr: 1,2-Dichloroethane-d4	99150	0	100000	0	99.2	70-130	100000	0.854	30	
Surr: 4-Bromofluorobenzene	96250	0	100000	0	96.2	70-130	98000	1.8	30	
Surr: Dibromofluoromethane	104400	0	100000	0	104	70-130	105800	1.38	30	
Surr: Toluene-d8	99400	0	100000	0	99.4	70-130	101800	2.39	30	

The following samples were analyzed in this batch: | 1306940-01A |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49275**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-49275-49275</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359771</b>		Prep Date: <b>6/24/2013</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      0.49

<b>LCS</b>		Sample ID: <b>LCS-49275-49275</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359770</b>		Prep Date: <b>6/24/2013</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      1.839      0.49      1.961      0      93.8      75-110      0

<b>MS</b>		Sample ID: <b>1306766-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359764</b>		Prep Date: <b>6/24/2013</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      1.36      0.49      1.976      0.1344      62      60-130      0

<b>MSD</b>		Sample ID: <b>1306766-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359765</b>		Prep Date: <b>6/24/2013</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      1.36      0.49      1.976      0.1344      62      60-130      1.36      0      30

The following samples were analyzed in this batch:

1306940-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **49365** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

<b>DUP</b>		Sample ID: <b>1306940-01C DUP</b>				Units: <b>mmhos/cm @25°F</b>		Analysis Date: <b>6/28/2013 02:55 PM</b>		
Client ID: <b>Excavation Footprint, 17'</b>		Run ID: <b>WETCHEM_130628C</b>		SeqNo: <b>2364876</b>		Prep Date: <b>6/28/2013</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 @ Saturatio	1.79	0.25	0	0	0		1.785	0.28	50	

The following samples were analyzed in this batch:

1306940-01C

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **R122710** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-R122710-R122710				Units: s.u.			Analysis Date: 6/24/2013 01:09 PM			
Client ID:				Run ID: WETCHEM_130624G				SeqNo: 2358838			Prep Date:		DF: 1	
Analyte		Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

pH	4.38	0	4.4	0	99.5	90-110	0			
----	------	---	-----	---	------	--------	---	--	--	--

DUP				Sample ID: 1306878-01A DUP				Units: s.u.			Analysis Date: 6/24/2013 01:09 PM			
Client ID:				Run ID: WETCHEM_130624G				SeqNo: 2358840			Prep Date:		DF: 1	
Analyte		Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

pH	8.34	0	0	0	0	0-0	8.35	0.12	20	
----	------	---	---	---	---	-----	------	------	----	--

DUP				Sample ID: 1306943-12C DUP				Units: s.u.			Analysis Date: 6/24/2013 01:09 PM			
Client ID:				Run ID: WETCHEM_130624G				SeqNo: 2358855			Prep Date:		DF: 1	
Analyte		Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

pH	8.71	0	0	0	0	0-0	8.7	0.115	20	
----	------	---	---	---	---	-----	-----	-------	----	--

The following samples were analyzed in this batch:

1306940-01B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1306940  
**Project:** PDC Parachute Creek 9 13-199-1 6/21/13

## QC BATCH REPORT

Batch ID: **R122777** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R122777				Units: % of sample		Analysis Date: 6/24/2013 02:00 PM		
Client ID:		Run ID: MOIST_130624F				SeqNo: 2360519		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.03	0.050								J

LCS		Sample ID: LCS-R122777				Units: % of sample		Analysis Date: 6/24/2013 02:00 PM		
Client ID:		Run ID: MOIST_130624F				SeqNo: 2360517		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: 1306943-03B DUP				Units: % of sample			Analysis Date: 6/24/2013 02:00 PM			
Client ID:				Run ID: MOIST_130624F				SeqNo: 2360496			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Moisture	17.72	0.050	0	0	0	0-0	17.17	3.15	20					

DUP				Sample ID: 1306943-07B DUP				Units: % of sample			Analysis Date: 6/24/2013 02:00 PM			
Client ID:				Run ID: MOIST_130624F				SeqNo: 2360504			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Moisture	17.74	0.050	0	0	0	0-0	17.15	3.38	20					

The following samples were analyzed in this batch:

1306940-01B

**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  
#

1306940

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME PDC PARACHUTE CREEK 9

SAMPLER

Casey Richardson

DATE

6-21-13

TURNAROUND

24 HOUR

PROJECT No. 13-199-1

EDD FORMAT

PURCHASE ORDER

COMPANY NAME HCSI

BILL TO COMPANY

PDC Energy CAERUS

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

DRO

GRO

BTEX

TOTAL METALS - TABLE 910.1

SEMI VOL - PAH

SAB

EC

PH

EXCAVATION FOOTPRINT, 17'

SOIL

6-21-13

1405

3

B

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:

15.0°C

QC PACKAGE (check below)

X

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms  
+ raw data)

RELINQUISHED BY

Casey Richardson

RECEIVED BY

Richardson

RELINQUISHED BY

Richardson

RECEIVED BY

Diane F. Shaw

RELINQUISHED BY

RECEIVED BY

SIGNATURE

PRINTED NAME

DATE

TIME

Casey Richardson

6-21-13

1517

Richardson

6-21-13

1517

Richardson

6-21-13

1525

Diane F. Shaw

6-24-13

0930

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **24-Jun-13 09:30**

Work Order: **1306940**

Received by: **DS**

Checklist completed by Diane Shaw 24-Jun-13  
eSignature Date

Reviewed by: Bill Carey 24-Jun-13  
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 type="checkbox"/>	No <input checked="" type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>15.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/24/2013 10:18:10 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:

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

Origin ID: RILA



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

Ship Date: 21JUN13  
ActWgt: 30.0 LB  
CAD: 103923490/NET3370

Delivery Address Bar Code



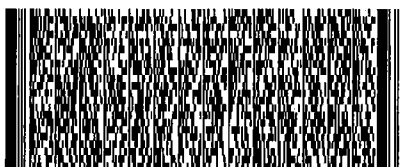
Ref # 1001-062113-1  
Invoice #  
PO #  
Dept #

MON - 24 JUN 3:00P  
STANDARD OVERNIGHT

TRK# 7960 6914 7087  
0201

**XX GRRRA**

**49424**  
MI-US  
GRR



518G10777B3AB

**After printing this label:**

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

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Lab Hub LLC. Custody seal

Date: 6/21

Time: 16:28



05-Jul-2013

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

Re: **PDC Parachute Creek 9 13-199-1 6/28/13**

Work Order: **13061157**

Dear Herman,

ALS Environmental received 2 samples on 29-Jun-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 23.

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: Bill Carey

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 stylized blue triangle with a yellow flame inside.

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

RIGHT SOLUTIONS RIGHT PARTNER

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13  
**Work Order:** 13061157

**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>
13061157-01	North Wall, 7'	Soil		6/28/2013 10:55	6/29/2013 10:00	<input type="checkbox"/>
13061157-02	Containment Cell	Soil		6/28/2013 13:15	6/29/2013 10:00	<input type="checkbox"/>

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13  
**WorkOrder:** 13061157

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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
none	
s.u.	Standard Units

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13  
**Work Order:** 13061157

---

**Case Narrative**

Batch 49418, Method ICP\_6020\_S, Sample 13061046-08AMS and MSD: The MS and/or MSD recovery was outside of the control. The parent sample is unrelated to this Work Order.



# ALS Group USA, Corp

Date: 05-Jul-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/28/13

Sample ID: North Wall, 7'

Collection Date: 6/28/2013 10:55 AM

Work Order: 13061157

Lab ID: 13061157-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>24</b>		<b>SW8015M</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>CW</b>
			<b>5.0</b>	<b>mg/Kg-dry</b>	1	7/1/2013 01:22 PM
Surr: 4-Terphenyl-d14	41.4		39-115	%REC	1	7/1/2013 01:22 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>			Analyst: <b>RD</b>
			3.0	mg/Kg-dry	50	7/1/2013 01:35 PM
Surr: Toluene-d8	103		50-150	%REC	50	7/1/2013 01:35 PM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>LR</b>
			0.018	mg/Kg-dry	1	7/1/2013 03:17 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>8.9</b>		<b>SW6020A</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>ML</b>
			1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Barium</b>	<b>290</b>		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
Cadmium	ND		0.75	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Chromium</b>	<b>11</b>		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Copper</b>	<b>18</b>		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Lead</b>	<b>13</b>		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Nickel</b>	<b>17</b>		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
Selenium	ND		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
Silver	ND		1.9	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>Zinc</b>	<b>65</b>		3.8	mg/Kg-dry	5	7/1/2013 03:50 PM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>32</b>		<b>SW6020A</b>		Prep Date: <b>7/3/2013</b>	Analyst: <b>ML</b>
			10	mg/L	20	7/3/2013 05:45 PM
<b>Magnesium</b>	<b>28</b>		4.0	mg/L	20	7/3/2013 05:45 PM
<b>Sodium</b>	<b>100</b>		4.0	mg/L	20	7/3/2013 05:45 PM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>3.2</b>		<b>USDA H60 METHOD</b>		Prep Date: <b>7/3/2013</b>	Analyst: <b>ML</b>
			0.010	none	1	7/3/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>RM</b>
			18	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Acenaphthylene</b>	<b>ND</b>		36	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Anthracene</b>	<b>ND</b>		18	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		20	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		20	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		22	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		34	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		22	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Chrysene</b>	<b>ND</b>		18	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		22	µg/Kg-dry	1	7/1/2013 12:24 PM
<b>Fluoranthene</b>	<b>ND</b>		18	µg/Kg-dry	1	7/1/2013 12:24 PM

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

# ALS Group USA, Corp

Date: 05-Jul-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/28/13

Sample ID: North Wall, 7'

Collection Date: 6/28/2013 10:55 AM

Work Order: 13061157

Lab ID: 13061157-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		18	µg/Kg-dry	1	7/1/2013 12:24 PM
Indeno(1,2,3-cd)pyrene	ND		24	µg/Kg-dry	1	7/1/2013 12:24 PM
Naphthalene	ND		18	µg/Kg-dry	1	7/1/2013 12:24 PM
Pyrene	ND		18	µg/Kg-dry	1	7/1/2013 12:24 PM
Surr: 2-Fluorobiphenyl	64.3		12-100	%REC	1	7/1/2013 12:24 PM
Surr: 4-Terphenyl-d14	96.6		25-137	%REC	1	7/1/2013 12:24 PM
Surr: Nitrobenzene-d5	61.1		37-107	%REC	1	7/1/2013 12:24 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: 7/1/2013	Analyst: <b>BG</b>
Benzene	ND		36	µg/Kg-dry	1	7/1/2013 01:39 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	7/1/2013 01:39 PM
m,p-Xylene	ND		72	µg/Kg-dry	1	7/1/2013 01:39 PM
o-Xylene	ND		36	µg/Kg-dry	1	7/1/2013 01:39 PM
Toluene	ND		36	µg/Kg-dry	1	7/1/2013 01:39 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	7/1/2013 01:39 PM
Surr: 1,2-Dichloroethane-d4	106		70-130	%REC	1	7/1/2013 01:39 PM
Surr: 4-Bromofluorobenzene	101		70-130	%REC	1	7/1/2013 01:39 PM
Surr: Dibromofluoromethane	100		70-130	%REC	1	7/1/2013 01:39 PM
Surr: Toluene-d8	98.8		70-130	%REC	1	7/1/2013 01:39 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHOD</b>		Prep Date: 7/3/2013	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	1.1		0.025	mmhos/cm @25	5	7/3/2013 03:00 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>JJG</b>
Chromium, Trivalent	11		0.60	mg/Kg-dry	1	7/2/2013 07:54 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 6/30/2013	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	7/1/2013 02:00 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	17		0.050	% of sample	1	7/1/2013 11:00 AM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>CH</b>
pH	8.3			s.u.	1	7/1/2013 12:16 PM

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

# ALS Group USA, Corp

Date: 05-Jul-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/28/13

Sample ID: Containment Cell

Collection Date: 6/28/2013 01:15 PM

Work Order: 13061157

Lab ID: 13061157-02

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>CW</b>
<b>DRO (C10-C28)</b>	<b>590</b>		<b>4.9</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/1/2013 12:52 PM
Surr: 4-Terphenyl-d14	68.7		39-115	%REC	1	7/1/2013 12:52 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>			Analyst: <b>RD</b>
<b>GRO (C6-C10)</b>	<b>2,400</b>		<b>3.0</b>	<b>mg/Kg-dry</b>	<b>50</b>	7/1/2013 01:59 PM
Surr: Toluene-d8	101		50-150	%REC	50	7/1/2013 01:59 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260</b>		Prep Date: <b>7/1/2013</b>	Analyst: <b>BG</b>
<b>Benzene</b>	<b>950</b>		<b>360</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
<b>Ethylbenzene</b>	<b>6,000</b>		<b>360</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
<b>m,p-Xylene</b>	<b>96,000</b>		<b>720</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
<b>o-Xylene</b>	<b>17,000</b>		<b>360</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
<b>Toluene</b>	<b>26,000</b>		<b>360</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
<b>Xylenes, Total</b>	<b>110,000</b>		<b>1,100</b>	<b>µg/Kg-dry</b>	<b>10</b>	7/1/2013 02:12 PM
Surr: 1,2-Dichloroethane-d4	102		70-130	%REC	10	7/1/2013 02:12 PM
Surr: 4-Bromofluorobenzene	111		70-130	%REC	10	7/1/2013 02:12 PM
Surr: Dibromofluoromethane	97.0		70-130	%REC	10	7/1/2013 02:12 PM
Surr: Toluene-d8	113		70-130	%REC	10	7/1/2013 02:12 PM
<b>MOISTURE</b>						
			<b>A2540 G</b>			Analyst: <b>BD</b>
<b>Moisture</b>	<b>16</b>		<b>0.050</b>	<b>% of sample</b>	<b>1</b>	7/1/2013 11:00 AM

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

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 13061157

Project: PDC Parachute Creek 9 13-199-1 6/28/13

Batch ID: 49403 Instrument ID GC8 Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-49403-49403</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 11:52 AM</b>		
Client ID:		Run ID: <b>GC8_130701A</b>				SeqNo: <b>2366146</b>		Prep Date: <b>7/1/2013</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	4.2								
Surr: 4-Terphenyl-d14	0.819	0	1.667	0	49.1	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-49403-49403</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 12:22 PM</b>		
Client ID:		Run ID: <b>GC8_130701A</b>				SeqNo: <b>2366147</b>		Prep Date: <b>7/1/2013</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)	140.9	4.2	166.7	0	84.5	49-124	0			
Surr: 4-Terphenyl-d14	0.8847	0	1.667	0	53.1	39-115	0			

<b>MS</b>		Sample ID: <b>13061157-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 01:52 PM</b>		
Client ID: <b>North Wall, 7'</b>		Run ID: <b>GC8_130701A</b>				SeqNo: <b>2367375</b>		Prep Date: <b>7/1/2013</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)	266.6	8.1	322.6	19.97	76.5	49-130	0			
Surr: 4-Terphenyl-d14	1.501	0	3.226	0	46.5	39-115	0			

<b>MSD</b>		Sample ID: <b>13061157-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:22 PM</b>		
Client ID: <b>North Wall, 7'</b>		Run ID: <b>GC8_130701A</b>				SeqNo: <b>2367376</b>		Prep Date: <b>7/1/2013</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)	256	7.9	316.8	19.97	74.5	49-130	266.6	4.07	30	
Surr: 4-Terphenyl-d14	1.494	0	3.168	0	47.2	39-115	1.501	0.443	30	

The following samples were analyzed in this batch: | 13061157-01B | 13061157-02A |

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **R123018**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>GBLK1-130701-R123018</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/1/2013 01:10 PM</b>		
Client ID:		Run ID: <b>GC10_130701A</b>				SeqNo: <b>2366090</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
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>107.6</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>108</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>GLCS1-130701-R123018</b>				Units: <b>µg/L</b>		Analysis Date: <b>7/1/2013 12:46 PM</b>		
Client ID:		Run ID: <b>GC10_130701A</b>				SeqNo: <b>2366089</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
GRO (C6-C10)	8402	200	10000	0	84	70-130	0			
<i>Surr: Toluene-d8</i>	<i>110.6</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>111</i>	<i>70-130</i>	<i>0</i>			

The following samples were analyzed in this batch:      13061157-01A      13061157-02A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49417**      Instrument ID **HG1**      Method: **SW7471**

<b>MBLK</b>		Sample ID: <b>MBLK-49417-49417</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:13 PM</b>		
Client ID:		Run ID: <b>HG1_130701A</b>				SeqNo: <b>2366320</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      ND      0.020

<b>LCS</b>		Sample ID: <b>LCS-49417-49417</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 04:25 PM</b>		
Client ID:		Run ID: <b>HG1_130701A</b>				SeqNo: <b>2366499</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1906      0.020      0.1665      0      114      80-120      0

<b>MS</b>		Sample ID: <b>13061157-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:19 PM</b>		
Client ID: <b>North Wall, 7'</b>		Run ID: <b>HG1_130701A</b>				SeqNo: <b>2366325</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1452      0.015      0.1269      0.01322      104      75-125      0

<b>MSD</b>		Sample ID: <b>13061157-01BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:21 PM</b>		
Client ID: <b>North Wall, 7'</b>		Run ID: <b>HG1_130701A</b>				SeqNo: <b>2366330</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1546      0.016      0.1313      0.01322      108      75-125      0.1452      6.25      35

The following samples were analyzed in this batch:

13061157-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49418**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-49418-49418</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:50 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130701A</b>				SeqNo: <b>2366468</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	0.01098	0.25								J
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.03156	0.50								J

<b>LCS</b>		Sample ID: <b>LCS-49418-49418</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:26 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130701A</b>				SeqNo: <b>2366474</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.416	0.25	5	0	88.3	80-120	0			
Barium	4.924	0.25	5	0	98.5	80-120	0			
Cadmium	4.88	0.10	5	0	97.6	80-120	0			
Chromium	4.688	0.25	5	0	93.8	80-120	0			
Copper	4.708	0.25	5	0	94.2	80-120	0			
Lead	5.025	0.25	5	0	100	80-120	0			
Nickel	4.646	0.25	5	0	92.9	80-120	0			
Selenium	4.186	0.25	5	0	83.7	80-120	0			
Silver	4.658	0.25	5	0	93.2	80-120	0			
Zinc	4.544	0.50	5	0	90.9	80-120	0			

<b>MS</b>		Sample ID: <b>13061046-08AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:38 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130701A</b>				SeqNo: <b>2366477</b>		Prep Date: <b>7/1/2013</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.15	1.4	7.194	5.57	91.4	75-125	0			
Barium	63.48	1.4	7.194	54.35	127	75-125	0			SO
Cadmium	7.623	0.58	7.194	0.4533	99.7	75-125	0			
Chromium	17.5	1.4	7.194	9.874	106	75-125	0			
Copper	22.18	1.4	7.194	15.21	96.9	75-125	0			
Lead	28.14	1.4	7.194	21.42	93.5	75-125	0			
Nickel	13.18	1.4	7.194	5.895	101	75-125	0			
Selenium	7.283	1.4	7.194	0.8638	89.2	75-125	0			
Silver	6.786	1.4	7.194	0.218	91.3	75-125	0			
Zinc	58.85	2.9	7.194	51.83	97.6	75-125	0			O

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49418**      Instrument ID **ICPMS1**      Method: **SW6020A**

MSD		Sample ID: <b>13061046-08AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 03:44 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130701A</b>				SeqNo: <b>2366479</b>		Prep Date: <b>7/1/2013</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.02	1.5	7.386	5.57	142	75-125	12.15	27.5	25	SR
Barium	72.56	1.5	7.386	54.35	247	75-125	63.48	13.3	25	SO
Cadmium	7.888	0.59	7.386	0.4533	101	75-125	7.623	3.41	25	
Chromium	18.66	1.5	7.386	9.874	119	75-125	17.5	6.41	25	
Copper	23.07	1.5	7.386	15.21	106	75-125	22.18	3.93	25	
Lead	30.69	1.5	7.386	21.42	126	75-125	28.14	8.67	25	S
Nickel	13.5	1.5	7.386	5.895	103	75-125	13.18	2.45	25	
Selenium	7.95	1.5	7.386	0.8638	95.9	75-125	7.283	8.75	25	
Silver	7.223	1.5	7.386	0.218	94.8	75-125	6.786	6.25	25	
Zinc	62.13	3.0	7.386	51.83	139	75-125	58.85	5.42	25	SO

The following samples were analyzed in this batch:      13061157-01B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49402**      Instrument ID **SVMS6**      Method: **SW8270**

MBLK Sample ID: <b>SBLKS1-49402-49402</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/1/2013 10:28 AM</b>			
Client ID:		Run ID: <b>SVMS6_130701A</b>		SeqNo: <b>2366209</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Acenaphthylene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
<i>Surr: 2-Fluorobiphenyl</i>	1165	0	1667	0	69.9	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1879	0	1667	0	113	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1096	0	1667	0	65.8	37-107	0			

LCS Sample ID: <b>SLCSS1-49402-49402</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/1/2013 10:47 AM</b>			
Client ID:		Run ID: <b>SVMS6_130701A</b>		SeqNo: <b>2366210</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	481.7	30	666.7	0	72.2	45-110	0			
Acenaphthylene	477.7	30	666.7	0	71.6	45-105	0			
Anthracene	517.7	30	666.7	0	77.6	55-105	0			
Benzo(a)anthracene	547.7	30	666.7	0	82.1	50-110	0			
Benzo(a)pyrene	595.7	30	666.7	0	89.3	50-110	0			
Benzo(b)fluoranthene	611	30	666.7	0	91.6	45-115	0			
Benzo(g,h,i)perylene	560.7	30	666.7	0	84.1	40-125	0			
Benzo(k)fluoranthene	579.3	30	666.7	0	86.9	45-115	0			
Chrysene	557.7	30	666.7	0	83.6	55-110	0			
Dibenzo(a,h)anthracene	636	30	666.7	0	95.4	40-125	0			
Fluoranthene	536.3	30	666.7	0	80.4	55-115	0			
Fluorene	489.7	30	666.7	0	73.4	50-110	0			
Indeno(1,2,3-cd)pyrene	621	30	666.7	0	93.1	40-120	0			
Naphthalene	475.3	30	666.7	0	71.3	40-105	0			
Pyrene	572	30	666.7	0	85.8	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1146	0	1667	0	68.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1553	0	1667	0	93.2	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1159	0	1667	0	69.5	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49402**      Instrument ID: **SVMS6**      Method: **SW8270**

MS				Sample ID: <b>13061157-01B MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>7/1/2013 11:45 AM</b>	
Client ID: <b>North Wall, 7'</b>				Run ID: <b>SVMS6_130701A</b>			SeqNo: <b>2366223</b>		Prep Date: <b>7/1/2013</b>	
							DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	867.6	57	1262	0	68.7	45-110	0			
Acenaphthylene	882.7	57	1262	0	69.9	45-105	0			
Anthracene	928.8	57	1262	0	73.6	55-105	0			
Benzo(a)anthracene	1014	57	1262	0	80.3	50-110	0			
Benzo(a)pyrene	1085	57	1262	0	86	50-110	0			
Benzo(b)fluoranthene	1134	57	1262	0	89.8	45-115	0			
Benzo(g,h,i)perylene	935.1	57	1262	0	74.1	40-125	0			
Benzo(k)fluoranthene	1060	57	1262	0	84	45-115	0			
Chrysene	1011	57	1262	0	80.1	55-110	0			
Dibenzo(a,h)anthracene	1040	57	1262	0	82.4	40-125	0			
Fluoranthene	945.8	57	1262	0	74.9	55-115	0			
Fluorene	887.1	57	1262	0	70.3	50-110	0			
Indeno(1,2,3-cd)pyrene	1039	57	1262	0	82.3	40-120	0			
Naphthalene	836	57	1262	0	66.2	40-105	0			
Pyrene	1066	57	1262	0	84.5	45-125	0			
Surr: 2-Fluorobiphenyl	2117	0	3155	0	67.1	12-100	0			
Surr: 4-Terphenyl-d14	2930	0	3155	0	92.9	25-137	0			
Surr: Nitrobenzene-d5	2088	0	3155	0	66.2	37-107	0			

MSD				Sample ID: <b>13061157-01B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>7/1/2013 12:04 PM</b>	
Client ID: <b>North Wall, 7'</b>				Run ID: <b>SVMS6_130701A</b>			SeqNo: <b>2366224</b>		Prep Date: <b>7/1/2013</b>	
							DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	891.4	57	1274	0	69.9	45-110	867.6	2.71	30	
Acenaphthylene	898.4	57	1274	0	70.5	45-105	882.7	1.76	30	
Anthracene	962.1	57	1274	0	75.5	55-105	928.8	3.52	30	
Benzo(a)anthracene	1048	57	1274	0	82.2	50-110	1014	3.31	30	
Benzo(a)pyrene	1121	57	1274	0	88	50-110	1085	3.28	30	
Benzo(b)fluoranthene	1119	57	1274	0	87.8	45-115	1134	1.33	30	
Benzo(g,h,i)perylene	981.8	57	1274	0	77	40-125	935.1	4.88	30	
Benzo(k)fluoranthene	1121	57	1274	0	87.9	45-115	1060	5.57	30	
Chrysene	1037	57	1274	0	81.4	55-110	1011	2.59	30	
Dibenzo(a,h)anthracene	1087	57	1274	0	85.3	40-125	1040	4.43	30	
Fluoranthene	972.9	57	1274	0	76.3	55-115	945.8	2.83	30	
Fluorene	927	57	1274	0	72.7	50-110	887.1	4.4	30	
Indeno(1,2,3-cd)pyrene	1094	57	1274	0	85.8	40-120	1039	5.2	30	
Naphthalene	872.3	57	1274	0	68.4	40-105	836	4.24	30	
Pyrene	1124	57	1274	0	88.2	45-125	1066	5.26	30	
Surr: 2-Fluorobiphenyl	2176	0	3186	0	68.3	12-100	2117	2.72	40	
Surr: 4-Terphenyl-d14	3109	0	3186	0	97.6	25-137	2930	5.95	40	
Surr: Nitrobenzene-d5	2216	0	3186	0	69.6	37-107	2088	5.96	40	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

---

Batch ID: **49402**      Instrument ID **SVMS6**      Method: **SW8270**

---

The following samples were analyzed in this batch:

13061157-01B
--------------

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49412**      Instrument ID **VMS6**      Method: **SW8260**

MBLK Sample ID: <b>MBLK-49412-49412</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/1/2013 12:49 PM</b>			
Client ID:		Run ID: <b>VMS6_130701A</b>		SeqNo: <b>2366412</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>		
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	1005	0	1000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	992.5	0	1000	0	99.2	70-130	0			
Surr: Dibromofluoromethane	993.5	0	1000	0	99.4	70-130	0			
Surr: Toluene-d8	986.5	0	1000	0	98.6	70-130	0			

LCS Sample ID: <b>LCS1-49412-49412</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/1/2013 11:35 AM</b>			
Client ID:		Run ID: <b>VMS6_130701A</b>		SeqNo: <b>2366411</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1060	30	1000	0	106	75-125	0			
Ethylbenzene	1053	30	1000	0	105	75-125	0			
m,p-Xylene	2115	60	2000	0	106	80-125	0			
o-Xylene	1060	30	1000	0	106	75-125	0			
Toluene	1024	30	1000	0	102	70-125	0			
Xylenes, Total	3175	90	3000	0	106	75-125	0			
Surr: 1,2-Dichloroethane-d4	1028	0	1000	0	103	70-130	0			
Surr: 4-Bromofluorobenzene	1062	0	1000	0	106	70-130	0			
Surr: Dibromofluoromethane	1020	0	1000	0	102	70-130	0			
Surr: Toluene-d8	1024	0	1000	0	102	70-130	0			

MS Sample ID: <b>13061166-04A MS</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>7/2/2013 07:32 AM</b>			
Client ID:		Run ID: <b>VMS6_130701B</b>		SeqNo: <b>2367118</b>		Prep Date: <b>7/1/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	995	30	1000	0	99.5	75-125	0			
Ethylbenzene	972	30	1000	0	97.2	75-125	0			
m,p-Xylene	1940	60	2000	0	97	80-125	0			
o-Xylene	970	30	1000	0	97	75-125	0			
Toluene	955	30	1000	0	95.5	70-125	0			
Xylenes, Total	2910	90	3000	0	97	75-125	0			
Surr: 1,2-Dichloroethane-d4	999.5	0	1000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	1028	0	1000	0	103	70-130	0			
Surr: Dibromofluoromethane	1018	0	1000	0	102	70-130	0			
Surr: Toluene-d8	983	0	1000	0	98.3	70-130	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49412**      Instrument ID **VMS6**      Method: **SW8260**

MSD				Sample ID: 13061166-04A MSD		Units: µg/Kg		Analysis Date: 7/2/2013 07:57 AM		
Client ID:			Run ID: VMS6_130701B			SeqNo: 2367119		Prep Date: 7/1/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	940.5	30	1000	0	94	75-125	995	5.63	30	
Ethylbenzene	921.5	30	1000	0	92.2	75-125	972	5.33	30	
m,p-Xylene	1850	60	2000	0	92.5	80-125	1940	4.75	30	
o-Xylene	930.5	30	1000	0	93	75-125	970	4.16	30	
Toluene	907.5	30	1000	0	90.8	70-125	955	5.1	30	
Xylenes, Total	2780	90	3000	0	92.7	75-125	2910	4.55	30	
Surr: 1,2-Dichloroethane-d4	967	0	1000	0	96.7	70-130	999.5	3.31	30	
Surr: 4-Bromofluorobenzene	1004	0	1000	0	100	70-130	1028	2.36	30	
Surr: Dibromofluoromethane	953.5	0	1000	0	95.4	70-130	1018	6.54	30	
Surr: Toluene-d8	958	0	1000	0	95.8	70-130	983	2.58	30	

The following samples were analyzed in this batch:      13061157-01A      13061157-02A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **49411**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>	Sample ID: <b>MBLK-49411-49411</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:00 PM</b>		
Client ID:	Run ID: <b>WETCHEM_130701K</b>				SeqNo: <b>2366459</b>		Prep Date: <b>6/30/2013</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      0.49      0      0      0      0-0      0

<b>LCS</b>	Sample ID: <b>LCS-49411-49411</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:00 PM</b>		
Client ID:	Run ID: <b>WETCHEM_130701K</b>				SeqNo: <b>2366460</b>		Prep Date: <b>6/30/2013</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      1.839      0.49      1.961      0      93.8      75-110      0

<b>MS</b>	Sample ID: <b>13061075-01B MS</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:00 PM</b>		
Client ID:	Run ID: <b>WETCHEM_130701K</b>				SeqNo: <b>2366462</b>		Prep Date: <b>6/30/2013</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      0.1811      0.49      1.969      0      9.2      60-130      0      JS

<b>MSD</b>	Sample ID: <b>13061075-01B MSD</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>7/1/2013 02:00 PM</b>		
Client ID:	Run ID: <b>WETCHEM_130701K</b>				SeqNo: <b>2366463</b>		Prep Date: <b>6/30/2013</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      0.1811      0.49      1.969      0      9.2      60-130      0.1811      0      30      JS

The following samples were analyzed in this batch:

13061157-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **R123029**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>MB-R123029-R123029</b>				Units: % of sample		Analysis Date: <b>7/1/2013 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_130701A</b>		SeqNo: <b>2366294</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-R123029-R123029</b>				Units: % of sample		Analysis Date: <b>7/1/2013 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_130701A</b>		SeqNo: <b>2366295</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>13061157-01B DUP</b>				Units: % of sample		Analysis Date: <b>7/1/2013 11:00 AM</b>		
Client ID: <b>North Wall, 7'</b>		Run ID: <b>MOIST_130701A</b>		SeqNo: <b>2366297</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      17.04      0.050      0      0      0      0-0      16.79      1.48      20

The following samples were analyzed in this batch:

13061157-01B      13061157-02A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061157  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **R123040** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: <b>WLCSW1-130701-R123040</b>				Units: <b>s.u.</b>			Analysis Date: <b>7/1/2013 12:16 PM</b>			
Client ID:				Run ID: <b>WETCHEM_130701L</b>				SeqNo: <b>2366571</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			
pH		4.44	0	4.4	0	101	90-110	0						

DUP				Sample ID: 1307003-03B DUP				Units: s.u.			Analysis Date: 7/1/2013 12:16 PM			
Client ID:				Run ID: WETCHEM_130701L				SeqNo: 2366577			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH	7.07	0	0	0	0	0-0	7.06	0.142	20					

The following samples were analyzed in this batch:

13061157-01B

**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  
#

13061157

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME PDC PARACHUTE CREEK 9

SAMPLER Casey Richardson

DATE

6.28.13

TURNAROUND

24 HOUR

PROJECT No. 13.199.1

SITE ID

EDD FORMAT

COMPANY NAME HCSI

PURCHASE ORDER

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

DRD

GRO

BTEX

TOTAL METALS - TABLE 910.1

SEMI VOLCS - P&H

SAB

EC

PH

1 NORTH WALL, 7'

SOIL

6.28.13

1055

3

8

+

+

+

+

+

+

+

+

2 CONTAINMENT CELL

SOIL

6.28.13

1315

1

8

+

+

+

+

+

+

+

+

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

For metals or anions, please detail analytes below.

2.6c

Comments:

PLEASE SUBMIT RESULTS IN  
SEPARATE RESULTS REPORTS

QC PACKAGE (check below)

x

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms  
+ raw data)

SUBMIT PRELIMINARY RESULTS ASAP.  
NEED RESULTS BY 7.1.13,

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

6.28.13 1345

RECEIVED BY

W. H. M.

6.28.13 1345

RELINQUISHED BY

W. H. M.

6.28.13 1400

RECEIVED BY

Diane E. Shea

6/29/13 1000

RELINQUISHED BY

RECEIVED BY

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **29-Jun-13 10:00**

Work Order: **13061157**

Received by: **DS**

Checklist completed by *Diane Shaw* 29-Jun-13  
eSignature Date

Reviewed by: *Ann Preston* 30-Jun-13  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/29/2013 11:05:01 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:

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

Origin ID: RLA



Ship Date: 28 JUN 13  
Address: 0510 LB  
CND: 103823490INET3370

Dim: 25 X 14 X 15 IN

127 E First Street

PARACHUTE, CO 81635



1/31/13 21:20:26

SHIP TO: (616) 398-6070

Sample receiving

ALS Holland

3352 128TH AVE

HOLLAND, MI 49424

Delivery Address Bar Code



Ref # 1001-062313-1

Invoice #

PO #

Dept #

TRK# 7961 2560 2090  
[0201]

SATURDAY 12:00P  
PRIORITY OVERNIGHT

X0 GRRA

49424  
MIUS  
GRR



5186107778398

**After printing this label:**

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

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Lab Hub LLC. Custody seal

Date:

Time:



27-Jun-2013

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

Re: **PDC Parachute Creek 9 13-199-1 6/17/13**

Work Order: **1306766**

Dear Herman,

ALS Environmental received 1 sample on 19-Jun-2013 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 24.

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: Bill Carey

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

RIGHT SOLUTIONS RIGHT PARTNER

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13  
**Work Order:** 1306766

**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>
1306766-01	Containment Cell	Soil		6/17/2013 10:00	6/19/2013 09:30	<input type="checkbox"/>

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13  
**WorkOrder:** 1306766

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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
µmhos/cm @25°	Microhms-Centimeter at 25 Degrees Fahrenheit
none	
s.u.	Standard Units

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13  
**Work Order:** 1306766

---

**Case Narrative**

Batch 49274, Method ICP\_6020\_S, Sample 1306943-05CMS and MSD: The MS and/or MSD recovery was outside of the control. The parent sample is unrelated to this Work Order.

Batch R122519, Method GRO\_8015\_W, Sample 1306754-16A MSD: The matrix spike duplicate recovery was outside of the control limit. The parent sample is unrelated to this Work Order.

# ALS Group USA, Corp

Date: 27-Jun-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/17/13

Sample ID: Containment Cell

Collection Date: 6/17/2013 10:00 AM

Work Order: 1306766

Lab ID: 1306766-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>170</b>		<b>4.7</b>	<b>mg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 05:37 PM</b>
Surr: 4-Terphenyl-d14	41.7		39-115	%REC	1	6/19/2013 05:37 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>68</b>		<b>2.9</b>	<b>mg/Kg-dry</b>	<b>50</b>	<b>6/19/2013 11:51 PM</b>
Surr: Toluene-d8	100		50-150	%REC	50	6/19/2013 11:51 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.019</b>		<b>0.017</b>	<b>mg/Kg-dry</b>	<b>1</b>	<b>6/25/2013 02:06 PM</b>
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>12</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
<b>Barium</b>	<b>330</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
Cadmium	ND		0.77	mg/Kg-dry	5	6/25/2013 01:54 AM
<b>Chromium</b>	<b>18</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
<b>Copper</b>	<b>19</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
<b>Lead</b>	<b>15</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
<b>Nickel</b>	<b>18</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
Selenium	ND		1.9	mg/Kg-dry	5	6/25/2013 01:54 AM
Silver	ND		1.9	mg/Kg-dry	5	6/25/2013 01:54 AM
<b>Zinc</b>	<b>63</b>		<b>3.9</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>6/25/2013 01:54 AM</b>
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>43</b>		<b>10</b>	<b>mg/L</b>	<b>20</b>	<b>6/26/2013 03:58 AM</b>
<b>Magnesium</b>	<b>34</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	<b>6/26/2013 03:58 AM</b>
<b>Sodium</b>	<b>160</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	<b>6/26/2013 03:58 AM</b>
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>4.5</b>		<b>0.010</b>	<b>none</b>	<b>1</b>	<b>6/27/2013</b>
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Acenaphthylene</b>	<b>ND</b>		<b>34</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Anthracene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>19</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>19</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>32</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Chrysene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>
<b>Fluoranthene</b>	<b>ND</b>		<b>17</b>	<b>µg/Kg-dry</b>	<b>1</b>	<b>6/19/2013 09:11 PM</b>

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



# ALS Group USA, Corp

Date: 27-Jun-13

**Client:** HRL Compliance Solutions

**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

**Sample ID:** Containment Cell

**Collection Date:** 6/17/2013 10:00 AM

**Work Order:** 1306766

**Lab ID:** 1306766-01

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		17	µg/Kg-dry	1	6/19/2013 09:11 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	6/19/2013 09:11 PM
Naphthalene	ND		17	µg/Kg-dry	1	6/19/2013 09:11 PM
Pyrene	ND		17	µg/Kg-dry	1	6/19/2013 09:11 PM
Surr: 2-Fluorobiphenyl	58.3		12-100	%REC	1	6/19/2013 09:11 PM
Surr: 4-Terphenyl-d14	95.9		25-137	%REC	1	6/19/2013 09:11 PM
Surr: Nitrobenzene-d5	58.8		37-107	%REC	1	6/19/2013 09:11 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: <b>6/19/2013</b>	Analyst: <b>RS</b>
Benzene	ND		34	µg/Kg-dry	1	6/19/2013 05:18 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	6/19/2013 05:18 PM
<b>m,p-Xylene</b>	<b>360</b>		<b>69</b>	<b>µg/Kg-dry</b>	1	6/19/2013 05:18 PM
<b>o-Xylene</b>	<b>81</b>		<b>34</b>	<b>µg/Kg-dry</b>	1	6/19/2013 05:18 PM
Toluene	ND		34	µg/Kg-dry	1	6/19/2013 05:18 PM
<b>Xylenes, Total</b>	<b>440</b>		<b>100</b>	<b>µg/Kg-dry</b>	1	6/19/2013 05:18 PM
Surr: 1,2-Dichloroethane-d4	98.2		70-130	%REC	1	6/19/2013 05:18 PM
Surr: 4-Bromofluorobenzene	95.4		70-130	%REC	1	6/19/2013 05:18 PM
Surr: Dibromofluoromethane	95.8		70-130	%REC	1	6/19/2013 05:18 PM
Surr: Toluene-d8	102		70-130	%REC	1	6/19/2013 05:18 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHOD</b>		Prep Date: <b>6/21/2013</b>	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	1.5		0.050	mmhos/cm @25	10	6/25/2013 10:30 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	18		0.57	mg/Kg-dry	1	6/26/2013 10:25 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: <b>6/24/2013</b>	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	6/24/2013 11:00 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	13		0.050	% of sample	1	6/19/2013 03:10 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>JJG</b>
pH	8.8			s.u.	1	6/19/2013 11:30 AM

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

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1306766

Project: PDC Parachute Creek 9 13-199-1 6/17/13

Batch ID: 49180 Instrument ID GC8 Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-49180-49180</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 03:37 PM</b>		
Client ID:		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355684</b>		Prep Date: <b>6/19/2013</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	4.2								
Surr: 4-Terphenyl-d14	0.8857	0	1.667	0	53.1	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-49180-49180</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 04:07 PM</b>		
Client ID:		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355685</b>		Prep Date: <b>6/19/2013</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)	139.9	4.2	166.7	0	83.9	49-124	0			
Surr: 4-Terphenyl-d14	0.7797	0	1.667	0	46.8	39-115	0			

<b>MS</b>		Sample ID: <b>1306766-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 04:37 PM</b>		
Client ID: <b>Containment Cell</b>		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355686</b>		Prep Date: <b>6/19/2013</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)	457.9	7.9	316.3	149.3	97.6	49-130	0			
Surr: 4-Terphenyl-d14	1.73	0	3.163	0	54.7	39-115	0			

<b>MSD</b>		Sample ID: <b>1306766-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/19/2013 05:07 PM</b>		
Client ID: <b>Containment Cell</b>		Run ID: <b>GC8_130619A</b>				SeqNo: <b>2355687</b>		Prep Date: <b>6/19/2013</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)	460.8	8.1	323.3	149.3	96.4	49-130	457.9	0.627	30	
Surr: 4-Terphenyl-d14	1.834	0	3.233	0	56.7	39-115	1.73	5.87	30	

The following samples were analyzed in this batch: 1306766-01B

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

# QC BATCH REPORT

Batch ID: **R122519**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>GBLK1-130619-R122519</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/19/2013 03:39 PM</b>		
Client ID:		Run ID: <b>GC10_130619A</b>				SeqNo: <b>2355214</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
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>109.6</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>110</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>GLCS1-130619-R122519</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/19/2013 03:14 PM</b>		
Client ID:		Run ID: <b>GC10_130619A</b>				SeqNo: <b>2355213</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
GRO (C6-C10)	9282	200	10000	0	92.8	70-130	0			
<i>Surr: Toluene-d8</i>	<i>99.75</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>99.8</i>	<i>70-130</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>1306754-16A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/20/2013 12:16 PM</b>		
Client ID:		Run ID: <b>GC10_130619A</b>				SeqNo: <b>2355235</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
GRO (C6-C10)	7156	200	10000	0	71.6	70-130	0			
<i>Surr: Toluene-d8</i>	<i>105.3</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>105</i>	<i>70-130</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>1306754-16A MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/20/2013 12:41 PM</b>		
Client ID:		Run ID: <b>GC10_130619A</b>				SeqNo: <b>2355236</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
GRO (C6-C10)	6819	200	10000	0	68.2	70-130	7156	4.82	30	S
<i>Surr: Toluene-d8</i>	<i>108</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>108</i>	<i>70-130</i>	<i>105.3</i>	<i>2.49</i>	<i>30</i>	

The following samples were analyzed in this batch:

1306766-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49298**      Instrument ID **HG1**      Method: **SW7471**

<b>MBLK</b>	Sample ID: <b>MBLK-49298-49298</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:02 PM</b>		
Client ID:	Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360223</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      ND      0.020

<b>LCS</b>	Sample ID: <b>LCS-49298-49298</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:04 PM</b>		
Client ID:	Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360225</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1778      0.020      0.1665      0      107      80-120      0

<b>MS</b>	Sample ID: <b>1306940-01BMS</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:10 PM</b>		
Client ID:	Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360230</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1278      0.014      0.1207      0.01978      89.6      75-125      0

<b>MSD</b>	Sample ID: <b>1306940-01BMSD</b>					Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 02:12 PM</b>		
Client ID:	Run ID: <b>HG1_130625A</b>				SeqNo: <b>2360232</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1151      0.014      0.1129      0.01978      84.4      75-125      0.1278      10.5      35

The following samples were analyzed in this batch:

1306766-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49228**      Instrument ID **ICPMS2**      Method: **SW6020A**      **(Dissolve)**

<b>DUP</b>		Sample ID: <b>1306818-05BDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>6/26/2013 04:19 AM</b>		
Client ID:		Run ID: <b>ICPMS2_130625A</b>				SeqNo: <b>2361586</b>		Prep Date: <b>6/25/2013</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	99.4	10	0	0	0	0-0	-0.09646	200		
Magnesium	10.49	4.0	0	0	0	0-0	0.046	198		
Sodium	16.68	4.0	0	0	0	0-0	-2.32	265		

<b>DUP</b>		Sample ID: <b>1306818-05BDUP</b>				Units: <b>none</b>		Analysis Date: <b>6/27/2013</b>		
Client ID:		Run ID: <b>SAR_130627A</b>				SeqNo: <b>2363754</b>		Prep Date: <b>6/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.4253	0.010	0	0	0			0		

The following samples were analyzed in this batch: | 1306766-01C |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49274**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-49274-49274</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 01:42 AM</b>		
Client ID:		Run ID: <b>ICPMS1_130624A</b>				SeqNo: <b>2359206</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	0.0721	0.25								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	0.0337	0.25								J
Silver	ND	0.25								
Zinc	0.05715	0.50								J

<b>LCS</b>		Sample ID: <b>LCS-49274-49274</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 01:48 AM</b>		
Client ID:		Run ID: <b>ICPMS1_130624A</b>				SeqNo: <b>2359207</b>		Prep Date: <b>6/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.468	0.25	5	0	89.4	80-120	0			
Barium	5.01	0.25	5	0	100	80-120	0			
Cadmium	4.89	0.10	5	0	97.8	80-120	0			
Chromium	4.724	0.25	5	0	94.5	80-120	0			
Copper	4.662	0.25	5	0	93.2	80-120	0			
Lead	5.35	0.25	5	0	107	80-120	0			
Nickel	4.707	0.25	5	0	94.1	80-120	0			
Selenium	4.252	0.25	5	0	85	80-120	0			
Silver	5.775	0.25	5	0	116	80-120	0			
Zinc	4.507	0.50	5	0	90.1	80-120	0			

<b>MS</b>		Sample ID: <b>1306943-05CMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 04:09 AM</b>		
Client ID:		Run ID: <b>ICPMS1_130624A</b>				SeqNo: <b>2359244</b>		Prep Date: <b>6/24/2013</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.08	3.5	6.964	6.603	107	75-125	0			
Barium	18.03	3.5	6.964	11.86	88.5	75-125	0			
Cadmium	7.563	1.4	6.964	0.385	103	75-125	0			
Chromium	12.52	3.5	6.964	4.803	111	75-125	0			
Copper	22.49	3.5	6.964	14.4	116	75-125	0			
Lead	23.22	3.5	6.964	35.85	-181	75-125	0			SO
Nickel	17.15	3.5	6.964	10.13	101	75-125	0			
Selenium	7.423	3.5	6.964	1.22	89.1	75-125	0			
Silver	8.113	3.5	6.964	0.03892	116	75-125	0			
Zinc	79.32	7.0	6.964	62.71	238	75-125	0			SO

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49274**      Instrument ID **ICPMS1**      Method: **SW6020A**

MSD		Sample ID: <b>1306943-05CMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2013 04:15 AM</b>		
Client ID:		Run ID: <b>ICPMS1_130624A</b>				SeqNo: <b>2359245</b>		Prep Date: <b>6/24/2013</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.73	3.6	7.123	6.603	142	75-125	14.08	17.2	25	S
Barium	15.79	3.6	7.123	11.86	55.1	75-125	18.03	13.2	25	S
Cadmium	7.585	1.4	7.123	0.385	101	75-125	7.563	0.301	25	
Chromium	12.66	3.6	7.123	4.803	110	75-125	12.52	1.08	25	
Copper	22.02	3.6	7.123	14.4	107	75-125	22.49	2.08	25	
Lead	27.21	3.6	7.123	35.85	-121	75-125	23.22	15.8	25	SO
Nickel	17.14	3.6	7.123	10.13	98.5	75-125	17.15	0.0463	25	
Selenium	7.671	3.6	7.123	1.22	90.6	75-125	7.423	3.28	25	
Silver	7.906	3.6	7.123	0.03892	110	75-125	8.113	2.58	25	
Zinc	73.86	7.1	7.123	62.71	157	75-125	79.32	7.13	25	SO

The following samples were analyzed in this batch:      1306766-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49179**      Instrument ID **SVMS7**      Method: **SW8270**

MBLK Sample ID: <b>SBLKS1-49179-49179</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>6/19/2013 05:56 PM</b>			
Client ID:		Run ID: <b>SVMS7_130619A</b>		SeqNo: <b>2356110</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Acenaphthylene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
<i>Surr: 2-Fluorobiphenyl</i>	1128	0	1667	0	67.7	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	2185	0	1667	0	131	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1072	0	1667	0	64.3	37-107	0			

LCS Sample ID: <b>SLCSS1-49179-49179</b>				Units: <b>µg/Kg</b>			Analysis Date: <b>6/19/2013 06:19 PM</b>			
Client ID:		Run ID: <b>SVMS7_130619A</b>		SeqNo: <b>2356114</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	429.3	30	666.7	0	64.4	45-110	0			
Acenaphthylene	441	30	666.7	0	66.1	45-105	0			
Anthracene	502	30	666.7	0	75.3	55-105	0			
Benzo(a)anthracene	496.3	30	666.7	0	74.4	50-110	0			
Benzo(a)pyrene	529.7	30	666.7	0	79.4	50-110	0			
Benzo(b)fluoranthene	559.7	30	666.7	0	83.9	45-115	0			
Benzo(g,h,i)perylene	472.3	30	666.7	0	70.8	40-125	0			
Benzo(k)fluoranthene	565.7	30	666.7	0	84.8	45-115	0			
Chrysene	552.3	30	666.7	0	82.8	55-110	0			
Dibenzo(a,h)anthracene	498.3	30	666.7	0	74.7	40-125	0			
Fluoranthene	528.7	30	666.7	0	79.3	55-115	0			
Fluorene	464.3	30	666.7	0	69.6	50-110	0			
Indeno(1,2,3-cd)pyrene	496.3	30	666.7	0	74.4	40-120	0			
Naphthalene	440	30	666.7	0	66	40-105	0			
Pyrene	550.7	30	666.7	0	82.6	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1026	0	1667	0	61.6	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1824	0	1667	0	109	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1024	0	1667	0	61.5	37-107	0			

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49179**      Instrument ID **SVMS7**      Method: **SW8270**

MS				Sample ID: 1306766-01B MS				Units: µg/Kg		Analysis Date: 6/19/2013 08:25 PM			
Client ID: Containment Cell				Run ID: SVMS7_130619A				SeqNo:2356118		Prep Date: 6/19/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	800.6	57	1270	0	63	45-110	0						
Acenaphthylene	847.6	57	1270	0	66.7	45-105	0						
Anthracene	919.3	57	1270	0	72.4	55-105	0						
Benzo(a)anthracene	905.3	57	1270	0	71.3	50-110	0						
Benzo(a)pyrene	968.8	57	1270	0	76.3	50-110	0						
Benzo(b)fluoranthene	971.4	57	1270	0	76.5	45-115	0						
Benzo(g,h,i)perylene	865.3	57	1270	0	68.1	40-125	0						
Benzo(k)fluoranthene	992.3	57	1270	0	78.1	45-115	0						
Chrysene	966.9	57	1270	0	76.1	55-110	0						
Dibenzo(a,h)anthracene	889.5	57	1270	0	70	40-125	0						
Fluoranthene	931.4	57	1270	0	73.3	55-115	0						
Fluorene	879.9	57	1270	0	69.3	50-110	0						
Indeno(1,2,3-cd)pyrene	942.2	57	1270	0	74.2	40-120	0						
Naphthalene	906.6	57	1270	0	71.4	40-105	0						
Pyrene	1015	57	1270	0	79.9	45-125	0						
Surr: 2-Fluorobiphenyl	1968	0	3174	0	62	12-100	0						
Surr: 4-Terphenyl-d14	3242	0	3174	0	102	25-137	0						
Surr: Nitrobenzene-d5	2079	0	3174	0	65.5	37-107	0						

MSD				Sample ID: 1306766-01B MSD			Units: µg/Kg		Analysis Date: 6/19/2013 08:48 PM		
Client ID: Containment Cell			Run ID: SVMS7_130619A			SeqNo:2356122		Prep Date: 6/19/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	788.4	57	1268	0	62.2	45-110	800.6	1.53	30		
Acenaphthylene	826.5	57	1268	0	65.2	45-105	847.6	2.52	30		
Anthracene	960.2	57	1268	0	75.7	55-105	919.3	4.35	30		
Benzo(a)anthracene	926	57	1268	0	73	50-110	905.3	2.25	30		
Benzo(a)pyrene	1001	57	1268	0	79	50-110	968.8	3.31	30		
Benzo(b)fluoranthene	1006	57	1268	0	79.3	45-115	971.4	3.49	30		
Benzo(g,h,i)perylene	881	57	1268	0	69.5	40-125	865.3	1.79	30		
Benzo(k)fluoranthene	1029	57	1268	0	81.1	45-115	992.3	3.6	30		
Chrysene	972.9	57	1268	0	76.7	55-110	966.9	0.614	30		
Dibenzo(a,h)anthracene	895.6	57	1268	0	70.6	40-125	889.5	0.682	30		
Fluoranthene	920.3	57	1268	0	72.6	55-115	931.4	1.2	30		
Fluorene	882.2	57	1268	0	69.6	50-110	879.9	0.261	30		
Indeno(1,2,3-cd)pyrene	935.5	57	1268	0	73.8	40-120	942.2	0.712	30		
Naphthalene	876.5	57	1268	0	69.1	40-105	906.6	3.37	30		
Pyrene	1112	57	1268	0	87.7	45-125	1015	9.13	30		
Surr: 2-Fluorobiphenyl	1866	0	3169	0	58.9	12-100	1968	5.33	40		
Surr: 4-Terphenyl-d14	3589	0	3169	0	113	25-137	3242	10.1	40		
Surr: Nitrobenzene-d5	1952	0	3169	0	61.6	37-107	2079	6.31	40		

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

---

Batch ID: **49179**      Instrument ID **SVMS7**      Method: **SW8270**

---

The following samples were analyzed in this batch:

1306766-01B
-------------

---

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49164**      Instrument ID **VMS7**      Method: **SW8260**

<b>MBLK</b>		Sample ID: <b>MBLK-49164-49164</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/20/2013 03:24 AM</b>		
Client ID:		Run ID: <b>VMS7_130619A</b>				SeqNo: <b>2355276</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>
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	1030	0	1000	0	103	70-130	0			
Surr: 4-Bromofluorobenzene	1007	0	1000	0	101	70-130	0			
Surr: Dibromofluoromethane	979.5	0	1000	0	98	70-130	0			
Surr: Toluene-d8	1008	0	1000	0	101	70-130	0			

<b>LCS</b>		Sample ID: <b>LCS1-49164-49164</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/20/2013 01:42 AM</b>		
Client ID:		Run ID: <b>VMS7_130619A</b>				SeqNo: <b>2355275</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	984	30	1000	0	98.4	75-125	0			
Ethylbenzene	1012	30	1000	0	101	75-125	0			
m,p-Xylene	2016	60	2000	0	101	80-125	0			
o-Xylene	1012	30	1000	0	101	75-125	0			
Toluene	1014	30	1000	0	101	70-125	0			
Xylenes, Total	3028	90	3000	0	101	75-125	0			
Surr: 1,2-Dichloroethane-d4	978.5	0	1000	0	97.8	70-130	0			
Surr: 4-Bromofluorobenzene	1002	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	1012	0	1000	0	101	70-130	0			
Surr: Toluene-d8	1006	0	1000	0	101	70-130	0			

<b>MS</b>		Sample ID: <b>1306761-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/20/2013 11:28 AM</b>		
Client ID:		Run ID: <b>VMS7_130619A</b>				SeqNo: <b>2356292</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	896.5	30	1000	0	89.6	75-125	0			
Ethylbenzene	941	30	1000	0	94.1	75-125	0			
m,p-Xylene	1853	60	2000	0	92.6	80-125	0			
o-Xylene	919.5	30	1000	0	92	75-125	0			
Toluene	913	30	1000	0	91.3	70-125	0			
Xylenes, Total	2772	90	3000	0	92.4	75-125	0			
Surr: 1,2-Dichloroethane-d4	999.5	0	1000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	1028	0	1000	0	103	70-130	0			
Surr: Dibromofluoromethane	971.5	0	1000	0	97.2	70-130	0			
Surr: Toluene-d8	985	0	1000	0	98.5	70-130	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49164**      Instrument ID **VMS7**      Method: **SW8260**

<b>MSD</b>		Sample ID: <b>1306761-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/20/2013 11:55 AM</b>		
Client ID:		Run ID: <b>VMS7_130619A</b>				SeqNo: <b>2356293</b>		Prep Date: <b>6/19/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	844.5	30	1000	0	84.4	75-125	896.5	5.97	30	
Ethylbenzene	872.5	30	1000	0	87.2	75-125	941	7.55	30	
m,p-Xylene	1710	60	2000	0	85.5	80-125	1853	8.03	30	
o-Xylene	879	30	1000	0	87.9	75-125	919.5	4.5	30	
Toluene	850	30	1000	0	85	70-125	913	7.15	30	
Xylenes, Total	2589	90	3000	0	86.3	75-125	2772	6.85	30	
Surr: 1,2-Dichloroethane-d4	946	0	1000	0	94.6	70-130	999.5	5.5	30	
Surr: 4-Bromofluorobenzene	966.5	0	1000	0	96.6	70-130	1028	6.12	30	
Surr: Dibromofluoromethane	918	0	1000	0	91.8	70-130	971.5	5.66	30	
Surr: Toluene-d8	920.5	0	1000	0	92	70-130	985	6.77	30	

The following samples were analyzed in this batch: | 1306766-01A |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49228** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>1306818-05B DUP</b>				Units: <b>mmhos/cm @25°F</b>		Analysis Date: <b>6/25/2013 10:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625B</b>				SeqNo: <b>2359468</b>		Prep Date: <b>6/21/2013</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	0.716	0.050	0	0	0		0.629	12.9	50	

The following samples were analyzed in this batch:

1306766-01C

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **49275**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-49275-49275</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359771</b>		Prep Date: <b>6/24/2013</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      0.49

<b>LCS</b>		Sample ID: <b>LCS-49275-49275</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359770</b>		Prep Date: <b>6/24/2013</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      1.839      0.49      1.961      0      93.8      75-110      0

<b>MS</b>		Sample ID: <b>1306766-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID: <b>Containment Cell</b>		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359764</b>		Prep Date: <b>6/24/2013</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      1.36      0.49      1.976      0.1344      62      60-130      0

<b>MSD</b>		Sample ID: <b>1306766-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/24/2013 11:00 AM</b>		
Client ID: <b>Containment Cell</b>		Run ID: <b>WETCHEM_130625K</b>				SeqNo: <b>2359765</b>		Prep Date: <b>6/24/2013</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      1.36      0.49      1.976      0.1344      62      60-130      1.36      0      30

The following samples were analyzed in this batch:

1306766-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **R122500**      Instrument ID **WETCHEM**      Method: **A4500-H B**

<b>LCS</b>		Sample ID: <b>LCS-R122500-R122500</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/19/2013 11:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_1306190</b>				SeqNo: <b>2354956</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
pH	4.26	0	4.4	0	96.8	90-110	0			

<b>LCS</b>		Sample ID: <b>WLCSS1-130619-R122500</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/19/2013 11:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_1306190</b>				SeqNo: <b>2355100</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
pH	4.26	0	4.4	0	96.8	90-110	0			

<b>DUP</b>		Sample ID: <b>1306777-01C DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/19/2013 11:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_1306190</b>				SeqNo: <b>2354960</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
pH	7.21	0	0	0	0	0-0	7.21	0	20	

<b>DUP</b>		Sample ID: <b>1306744-01B DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/19/2013 11:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_1306190</b>				SeqNo: <b>2355103</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
pH	8.11	0	0	0	0	0-0	8.11	0	20	

The following samples were analyzed in this batch:

1306766-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1306766  
**Project:** PDC Parachute Creek 9 13-199-1 6/17/13

## QC BATCH REPORT

Batch ID: **R122525** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS-R122525					Units: % of sample		Analysis Date: 6/19/2013 03:10 PM		
Client ID:				Run ID: MOIST_130619B		SeqNo: 2355388		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-R122525					Units: % of sample		Analysis Date: 6/19/2013 03:10 PM		
Client ID:			Run ID: MOIST_130619B			SeqNo: 2355386		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: 1306743-01B DUP					Units: % of sample		Analysis Date: 6/19/2013 03:10 PM		
Client ID:				Run ID:	MOIST_130619B	SeqNo: 2355351	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.51 0.050 0 0 0 0-0 10.81 2.81 20

DUP	Sample ID: 1306760-01B DUP					Units: % of sample		Analysis Date: 6/19/2013 03:10 PM		
Client ID:				Run ID:	MOIST_130619B	SeqNo: 2355373		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.42 0.050 0 0 0 0-0 19.14 6.47 20

The following samples were analyzed in this batch:

1306766-01B

**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  
#

1306766

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

PDC PARACHUTE CREEK 9

SAMPLER

Casey Richardson

DATE

6.17.13

SITE ID

TURNAROUND

24 HOUR

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

DRD

GRO

BTEX

TOTAL METALS - TABLE 9 (O-)

SEMI VOLS - PAH

SAR

EC

PH

1 CONTAINMENT CELL

SOIL

6.17.13

1000

3

8

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:

3.2°C  
RUN DRD, GRO & BTEX FIRST. IF DRD,  
GRO ARE LESS THAN 500 RUN  
REMAINDER OF ANALYTICAL SUITE.  
IF ABOVE 500 DO NOT RUN FULL  
ANALYTICAL SUITE.

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

Casey Richardson

6.17.13

1130

RECEIVED BY

Mark

Mark

6-17

1130

RELINQUISHED BY

Mark

Mark

6-17-13

1400

RECEIVED BY

Diane F Sha

Diane F Sha

6/19/13

0930

RELINQUISHED BY

RECEIVED BY

## Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **19-Jun-13 09:30**

Work Order: **1306766**

Received by: **DS**

Checklist completed by *Diane Shaw* 19-Jun-13  
eSignature Date

Reviewed by: *Ann Preston* 19-Jun-13  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/19/2013 1:28:06 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:			
Login Notes:			

Client Contacted:

Date Contacted:


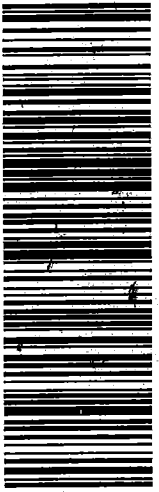
Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

<b>From:</b> (970) 424-4749 <b>Lab Hub, LLC</b>  <b>127 E First Street</b> <b>PARACHUTE, CO 81635</b>	<b>Origin ID:</b> RILA  <b>Ship Date:</b> 17JUN13 <b>ActWgt:</b> 45.0 LB <b>SAD:</b> 10392349/NET3370	<b>Dimensions:</b> 25 X 14 X 15 IN  <b>Delivery Address Bar Code</b> 
<b>SHIP TO:</b> (616) 399-6070 <b>Sample recieving</b> <b>ALS Holland</b> <b>3352 128TH AVE</b>  <b>HOLLAND, MI 49424</b>	<b>Ref #</b> 1001-061713-1 <b>Invoice #</b> <b>PO #</b> <b>Dept #</b>	<b>TUE - 18 JUN 3:00P</b> <b>STANDARD OVERNIGHT</b>  <b>49424</b> <b>MI-US</b> <b>GRR</b>
<b>SHIP TO:</b> (616) 399-6070 <b>Sample recieving</b> <b>ALS Holland</b> <b>3352 128TH AVE</b>  <b>HOLLAND, MI 49424</b>	<b>TRK#</b> 7960 1945 2263 <b>1201</b>	<b>XX GRRA</b>  

**After printing this label:**

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

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

**FRAGILE**

**Lab Hub LLC. Custody seal**

**Date:** 6-17  
**Time:** 1:43 PM

32°C



09-Jul-2013

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

Re: **PDC Parachute Creek 9 13-199-1 6/28/13**

Work Order: **13061156**

Dear Herman,

ALS Environmental received 3 samples on 29-Jun-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 12.

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: Bill Carey

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

RIGHT SOLUTIONS RIGHT PARTNER

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13  
**Work Order:** 13061156

---

**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>
13061156-01	BKGD 1	Soil		6/28/2013 09:05	6/29/2013 10:00	<input type="checkbox"/>
13061156-02	BKGD 2	Soil		6/28/2013 09:12	6/29/2013 10:00	<input type="checkbox"/>
13061156-03	BKGD 3	Soil		6/28/2013 09:17	6/29/2013 10:00	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13  
**WorkOrder:** 13061156

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
none	
s.u.	Standard Units

**ALS Group USA, Corp**

Date: 09-Jul-13

Client: HRL Compliance Solutions

Project: PDC Parachute Creek 9 13-199-1 6/28/13

Sample ID: BKGD 1

Collection Date: 6/28/2013 09:05 AM

Work Order: 13061156

Lab ID: 13061156-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/2/2013</b>	Analyst: <b>ML</b>
Arsenic	22		2.0	mg/Kg-dry	5	7/2/2013 11:03 PM
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW6020A</b>		Prep Date: <b>7/3/2013</b>	Analyst: <b>ML</b>
Calcium	76		10	mg/L	20	7/3/2013 05:39 PM
Magnesium	59		4.0	mg/L	20	7/3/2013 05:39 PM
Sodium	40		4.0	mg/L	20	7/3/2013 05:39 PM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHOD</b>		Prep Date: <b>7/3/2013</b>	Analyst: <b>ML</b>
Sodium Adsorption Ratio	0.83		0.010	none	1	7/3/2013
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHOD</b>		Prep Date: <b>7/3/2013</b>	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	0.99		0.025	mmhos/cm @25	5	7/3/2013 03:00 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	7.1		0.050	% of sample	1	7/1/2013 02:23 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>CH</b>
pH	8.8			s.u.	1	7/1/2013 12:16 PM

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

## ALS Group USA, Corp

Date: 09-Jul-13

**Client:** HRL Compliance Solutions

**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

**Work Order:** 13061156

**Sample ID:** BKGD 2

**Lab ID:** 13061156-02

**Collection Date:** 6/28/2013 09:12 AM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/2/2013</b>	Analyst: <b>ML</b>
Arsenic	14		1.7	mg/Kg-dry	5	7/2/2013 11:08 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	3.9		0.050	% of sample	1	7/1/2013 02:23 PM

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



## ALS Group USA, Corp

Date: 09-Jul-13

**Client:** HRL Compliance Solutions

**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

**Work Order:** 13061156

**Sample ID:** BKGD 3

**Lab ID:** 13061156-03

**Collection Date:** 6/28/2013 09:17 AM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>7/2/2013</b>	Analyst: <b>ML</b>
Arsenic	14		2.1	mg/Kg-dry	5	7/2/2013 11:14 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>BD</b>
Moisture	21		0.050	% of sample	1	7/1/2013 02:23 PM

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

Client: HRL Compliance Solutions

Work Order: 13061156

Project: PDC Parachute Creek 9 13-199-1 6/28/13

# QC BATCH REPORT

Batch ID: 49457 Instrument ID ICPMS1 Method: SW6020A

<b>MBLK</b>		Sample ID: <b>MBLK-49457-49457</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/2/2013 09:58 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130702A</b>				SeqNo: <b>2368581</b>		Prep Date: <b>7/2/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

<b>MBLK</b>		Sample ID: <b>MBLK-49457-49457</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/3/2013 04:06 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130703A</b>				SeqNo: <b>2369368</b>		Prep Date: <b>7/2/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

<b>LCS</b>		Sample ID: <b>LCS-49457-49457</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/2/2013 10:04 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130702A</b>				SeqNo: <b>2368582</b>		Prep Date: <b>7/2/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.486	0.25	5	0	89.7	80-120	0			

<b>LCS</b>		Sample ID: <b>LCS-49457-49457</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/3/2013 07:03 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130703A</b>				SeqNo: <b>2369544</b>		Prep Date: <b>7/2/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.672	0.25	5	0	93.4	80-120	0			

<b>MS</b>		Sample ID: <b>13061145-08AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/2/2013 10:45 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130702A</b>				SeqNo: <b>2368589</b>		Prep Date: <b>7/2/2013</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.59	1.4	7.003	11.66	84.7	75-125	0			

<b>MSD</b>		Sample ID: <b>13061145-08AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/2/2013 10:51 PM</b>		
Client ID:		Run ID: <b>ICPMS1_130702A</b>				SeqNo: <b>2368590</b>		Prep Date: <b>7/2/2013</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.99	1.4	6.859	11.66	77.7	75-125	17.59	3.47	25	

The following samples were analyzed in this batch: 13061156-01A 13061156-02A 13061156-03A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061156  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **R123040** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: <b>WLCSW1-130701-R123040</b>				Units: <b>s.u.</b>			Analysis Date: <b>7/1/2013 12:16 PM</b>			
Client ID:				Run ID: <b>WETCHEM_130701L</b>				SeqNo: <b>2366571</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			
pH		4.44	0	4.4	0	101	90-110	0						

DUP					Sample ID: 1307003-03B DUP					Units: s.u.			Analysis Date: 7/1/2013 12:16 PM			
Client ID:					Run ID: WETCHEM_130701L					SeqNo: 2366577			Prep Date:		DF: 1	
Analyte					Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
pH					7.07	0	0	0	0	0-0	7.06	0.142	20			

The following samples were analyzed in this batch:

13061156-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 13061156  
**Project:** PDC Parachute Creek 9 13-199-1 6/28/13

## QC BATCH REPORT

Batch ID: **R123060**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>	Sample ID: <b>WBLKS-R123060</b>				Units: % of sample			Analysis Date: <b>7/1/2013 02:23 PM</b>		
Client ID:	Run ID: <b>MOIST_130701B</b>				SeqNo: <b>2367229</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-R123060</b>				Units: % of sample			Analysis Date: <b>7/1/2013 02:23 PM</b>		
Client ID:	Run ID: <b>MOIST_130701B</b>				SeqNo: <b>2367228</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>13061166-05B DUP</b>				Units: % of sample			Analysis Date: <b>7/1/2013 02:23 PM</b>		
Client ID:	Run ID: <b>MOIST_130701B</b>				SeqNo: <b>2367205</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      15.4      0.050      0      0      0      0-0      13.67      11.9      20

<b>DUP</b>	Sample ID: <b>1307002-03A DUP</b>				Units: % of sample			Analysis Date: <b>7/1/2013 02:23 PM</b>		
Client ID:	Run ID: <b>MOIST_130701B</b>				SeqNo: <b>2367217</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      24.17      0.050      0      0      0      0-0      24.35      0.742      20

The following samples were analyzed in this batch:

13061156-01A	13061156-02A	13061156-03A
--------------	--------------	--------------

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

## Chain-of-Custody

Form 202r8

**WORKORDER**  
#

13061156

PAGE

1 of 1

## DISPOSAL

By Lab or Return to Client

[illegible]

\*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.**

<b>Comments:</b>  <div style="text-align: center; font-size: 2em;"> 2.62 JM </div>	<b>QC PACKAGE (check below)</b>	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
<b>Preservative Key:</b> 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>Casey Richardson</i>	Casey Richardson	6-28-13	1345
RECEIVED BY	<i>Michael</i>	Michael	6-28	1348
RELINQUISHED BY	<i>Diane F. Shaw</i>	Diane F. Shaw	6-28-13	1400
RECEIVED BY	<i>Diane F. Shaw</i>	Diane F. Shaw	6/29/13	1000
RELINQUISHED BY				
RECEIVED BY				

## Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **29-Jun-13 10:00**

Work Order: **13061156**

Received by: **DS**

Checklist completed by *Diane Shaw* 29-Jun-13  
eSignature Date

Reviewed by: *Ann Preston* 01-Jul-13  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/29/2013 11:03:54 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:



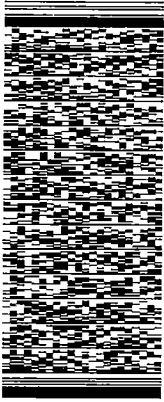

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

<b>From:</b> (970) 424-4749 Lab Hub, LLC 127 E First Street PARACHUTE, CO 81635	<b>Origin ID:</b> RILA <b>Ship Date:</b> 28 JUN 13 <b>Act Wgt:</b> 65.0 LB <b>CAD:</b> 103923490/NET3370	<b>Dimensions:</b> 25 X 14 X 15 IN 
<b>Delivery Address Bar Code</b> 		
<b>SHIP TO:</b> (616) 399-6076 Sample receiving ALS Holland 3352 128TH AVE HOLLAND, MI 49424	<b>Ref #</b> 1001-062813-1 <b>Invoice #</b> <b>PO #</b> <b>Dept #</b>	<b>TRK#</b> 7961 2560 2090 <b>0201</b>
	<b>SATURDAY 12:00P</b> <b>PRIORITY OVERNIGHT</b>	<b>49424</b> <b>MT-US</b> <b>GRR</b>
		

5183102776346

**After printing this label:**

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

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Lab Hub LLC. Custody seal

Date: 6-28

Time: 11:00