



01-Oct-2013

Kris Rowe  
HRL Compliance Solutions  
2385 F 1/2 Road  
Grand Junction, CO 81505

Re: **Koch Exploration -AHU Wyatt 25-43 9/18/13**

Work Order: **1309922**

Dear Kris,

ALS Environmental received 4 samples on 21-Sep-2013 09:00 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 29.

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

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Environmental 

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**Client:** HRL Compliance Solutions  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13  
**Work Order:** 1309922

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1309922-01	Drill Cuttings	Soil		9/18/2013 12:00	9/21/2013 09:00	<input type="checkbox"/>
1309922-02	BKGD 1	Soil		9/18/2013 12:10	9/21/2013 09:00	<input type="checkbox"/>
1309922-03	BKGD 2	Soil		9/18/2013 12:15	9/21/2013 09:00	<input type="checkbox"/>
1309922-04	BKGD 3	Soil		9/18/2013 12:20	9/21/2013 09:00	<input type="checkbox"/>

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**Client:** HRL Compliance Solutions  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13  
**Work Order:** 1309922

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**Case Narrative**

Batch 51760 sample Drill Cuttings MS/MSD recoveries for Hexavalent Chromium were below the control limit. The corresponding result in the parent sample may be biased low.

**Client:** HRL Compliance Solutions  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13  
**WorkOrder:** 1309922

## **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
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<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°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

# ALS Group USA, Corp

Date: 01-Oct-13

Client: HRL Compliance Solutions

Project: Koch Exploration -AHU Wyatt 25-43 9/18/13

Sample ID: Drill Cuttings

Collection Date: 9/18/2013 12:00 PM

Work Order: 1309922

Lab ID: 1309922-01

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>30</b>		<b>SW8015M</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>CW</b>
			<b>5.4</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/25/2013 01:37 AM
Surr: 4-Terphenyl-d14	63.8		39-115	%REC	1	9/25/2013 01:37 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>CW</b>
			<b>3.3</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/24/2013 11:46 PM
Surr: Toluene-d8	98.5		50-150	%REC	1	9/24/2013 11:46 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.092</b>		<b>SW7471</b>		Prep Date: <b>9/27/2013</b>	Analyst: <b>LR</b>
			<b>0.018</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/27/2013 04:52 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>5.9</b>		<b>SW6020A</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
			<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Barium</b>	<b>640</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Cadmium</b>	<b>1.3</b>		<b>0.88</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Chromium</b>	<b>9.2</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Copper</b>	<b>27</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Lead</b>	<b>130</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>Nickel</b>	<b>14</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
Selenium	ND		2.2	mg/Kg-dry	5	9/28/2013 07:06 AM
Silver	ND		2.2	mg/Kg-dry	5	9/28/2013 07:06 AM
<b>Zinc</b>	<b>63</b>		<b>4.4</b>	<b>mg/Kg-dry</b>	<b>5</b>	9/28/2013 07:06 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>430</b>		<b>SW6020A</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
			<b>10</b>	<b>mg/L</b>	<b>20</b>	9/29/2013 02:06 AM
Magnesium	ND		4.0	mg/L	20	9/29/2013 02:06 AM
<b>Sodium</b>	<b>1,900</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	9/29/2013 02:06 AM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>26</b>		<b>USDA H60 METHO</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
			<b>0.010</b>	<b>none</b>	<b>1</b>	9/28/2013
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>HL</b>
			<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Acenaphthylene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Anthracene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Chrysene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM

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

# ALS Group USA, Corp

Date: 01-Oct-13

**Client:** HRL Compliance Solutions  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13  
**Sample ID:** Drill Cuttings  
**Collection Date:** 9/18/2013 12:00 PM

**Work Order:** 1309922  
**Lab ID:** 1309922-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		8.7	µg/Kg-dry	1	9/26/2013 12:21 PM
Indeno(1,2,3-cd)pyrene	ND		8.7	µg/Kg-dry	1	9/26/2013 12:21 PM
<b>Naphthalene</b>	<b>17</b>		<b>8.7</b>	<b>µg/Kg-dry</b>	<b>1</b>	9/26/2013 12:21 PM
Pyrene	ND		8.7	µg/Kg-dry	1	9/26/2013 12:21 PM
Surr: 2-Fluorobiphenyl	67.7		12-100	%REC	1	9/26/2013 12:21 PM
Surr: 4-Terphenyl-d14	105		25-137	%REC	1	9/26/2013 12:21 PM
Surr: Nitrobenzene-d5	80.7		37-107	%REC	1	9/26/2013 12:21 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>	Prep Date: <b>9/24/2013</b> Analyst: <b>BG</b>		
Benzene	ND		40	µg/Kg-dry	1	9/26/2013 10:00 AM
Ethylbenzene	ND		40	µg/Kg-dry	1	9/26/2013 10:00 AM
m,p-Xylene	ND		80	µg/Kg-dry	1	9/26/2013 10:00 AM
o-Xylene	ND		40	µg/Kg-dry	1	9/26/2013 10:00 AM
Toluene	ND		40	µg/Kg-dry	1	9/26/2013 10:00 AM
Xylenes, Total	ND		120	µg/Kg-dry	1	9/26/2013 10:00 AM
Surr: 1,2-Dichloroethane-d4	96.0		70-130	%REC	1	9/26/2013 10:00 AM
Surr: 4-Bromofluorobenzene	96.9		70-130	%REC	1	9/26/2013 10:00 AM
Surr: Dibromofluoromethane	101		70-130	%REC	1	9/26/2013 10:00 AM
Surr: Toluene-d8	98.2		70-130	%REC	1	9/26/2013 10:00 AM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>	Prep Date: <b>9/25/2013</b> Analyst: <b>JB</b>		
Electrical Conductivity @ Saturation	11		0.025	mmhos/cm @2	5	9/25/2013 06:45 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>	Analyst: <b>JJG</b>		
Chromium, Trivalent	9.2		0.66	mg/Kg-dry	1	9/30/2013 04:55 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>	Prep Date: <b>9/27/2013</b> Analyst: <b>MB</b>		
Chromium, Hexavalent	ND		0.65	mg/Kg-dry	1	9/27/2013 03:15 PM
<b>MOISTURE</b>			<b>A2540 G</b>	Analyst: <b>MEB</b>		
Moisture	25		0.050	% of sample	1	9/24/2013 12:50 PM
<b>PH</b>			<b>SW9045D</b>	Prep Date: <b>9/24/2013</b> Analyst: <b>KF</b>		
pH	9.7			s.u.	1	9/24/2013 02:00 PM

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

**ALS Group USA, Corp**

Date: 01-Oct-13

Client: HRL Compliance Solutions

Project: Koch Exploration -AHU Wyatt 25-43 9/18/13

Work Order: 1309922

Sample ID: BKGD 1

Lab ID: 1309922-02

Collection Date: 9/18/2013 12:10 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>ML</b>
Arsenic	6.4		2.1	mg/Kg-dry	5	9/26/2013 10:51 PM
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW6020A</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
Calcium	82		10	mg/L	20	9/29/2013 02:12 AM
Magnesium	9.5		4.0	mg/L	20	9/29/2013 02:12 AM
Sodium	45		4.0	mg/L	20	9/29/2013 02:12 AM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHO</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
Sodium Adsorption Ratio	1.3		0.010	none	1	9/28/2013
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	0.71		0.025	mmhos/cm @2	5	9/25/2013 06:45 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>MEB</b>
Moisture	7.6		0.050	% of sample	1	9/23/2013 06:45 PM
<b>PH</b>			<b>SW9045D</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>KF</b>
pH	8.2			s.u.	1	9/24/2013 02:00 PM

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

## ALS Group USA, Corp

Date: 01-Oct-13

**Client:** HRL Compliance Solutions

**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

**Work Order:** 1309922

**Sample ID:** BKGD 2

**Lab ID:** 1309922-03

**Collection Date:** 9/18/2013 12:15 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>9/24/2013</b>	Analyst: <b>ML</b>
Arsenic	6.1		2.0	mg/Kg-dry	5	9/26/2013 10:57 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>MEB</b>
Moisture	7.5		0.050	% of sample	1	9/23/2013 06:45 PM

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



## ALS Group USA, Corp

Date: 01-Oct-13

**Client:** HRL Compliance Solutions

**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

**Work Order:** 1309922

**Sample ID:** BKGD 3

**Lab ID:** 1309922-04

**Collection Date:** 9/18/2013 12:20 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>9/25/2013</b>	Analyst: <b>ML</b>
Arsenic	6.3		1.8	mg/Kg-dry	5	9/28/2013 07:11 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>MEB</b>
Moisture	7.6		0.050	% of sample	1	9/23/2013 06:45 PM

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

Client: HRL Compliance Solutions

## QC BATCH REPORT

Work Order: 1309922

Project: Koch Exploration -AHU Wyatt 25-43 9/18/13

Batch ID: 51621

Instrument ID GC8

Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-51621-51621</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/24/2013 11:06 PM</b>		
Client ID:		Run ID: <b>GC8_130924A</b>				SeqNo: <b>2462513</b>		Prep Date: <b>9/24/2013</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								
Surr: 4-Terphenyl-d14	1.195	0	1.667	0	71.7	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-51621-51621</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/24/2013 11:36 PM</b>		
Client ID:		Run ID: <b>GC8_130924A</b>				SeqNo: <b>2462514</b>		Prep Date: <b>9/24/2013</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)	130.7	4.2	166.7	0	78.4	49-124	0			
Surr: 4-Terphenyl-d14	1.151	0	1.667	0	69	39-115	0			

<b>MS</b>		Sample ID: <b>1309923-02A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/25/2013 12:06 PM</b>		
Client ID:		Run ID: <b>GC8_130924A</b>				SeqNo: <b>2462522</b>		Prep Date: <b>9/24/2013</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)	305.7	8.1	322.9	50.74	78.9	49-130	0			
Surr: 4-Terphenyl-d14	1.823	0	3.229	0	56.4	39-115	0			

<b>MSD</b>		Sample ID: <b>1309923-02A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/25/2013 12:37 PM</b>		
Client ID:		Run ID: <b>GC8_130924A</b>				SeqNo: <b>2462523</b>		Prep Date: <b>9/24/2013</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)	275.2	7.9	316	50.74	71	49-130	305.7	10.5	30	
Surr: 4-Terphenyl-d14	1.659	0	3.16	0	52.5	39-115	1.823	9.4	30	

The following samples were analyzed in this batch: 1309922-01A

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51629**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>MBLK-51629-51629</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 08:38 PM</b>		
Client ID:		Run ID: <b>GC10_130924C</b>				SeqNo: <b>2462674</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	4976	0	5000	0	99.5	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-51629-51629</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 07:01 PM</b>		
Client ID:		Run ID: <b>GC10_130924C</b>				SeqNo: <b>2462672</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	452600	2,500	500000	0	90.5	70-130	0			
Surr: Toluene-d8	5316	0	5000	0	106	50-150	0			

<b>MS</b>		Sample ID: <b>1309924-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/25/2013 04:30 AM</b>		
Client ID:		Run ID: <b>GC10_130924C</b>				SeqNo: <b>2462684</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	448100	2,500	500000	0	89.6	70-130	0			
Surr: Toluene-d8	5066	0	5000	0	101	50-150	0			

<b>MSD</b>		Sample ID: <b>1309924-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/25/2013 04:54 AM</b>		
Client ID:		Run ID: <b>GC10_130924C</b>				SeqNo: <b>2462685</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	433100	2,500	500000	0	86.6	70-130	448100	3.39	30	
Surr: Toluene-d8	5245	0	5000	0	105	50-150	5066	3.48	30	

The following samples were analyzed in this batch:

1309922-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51743**      Instrument ID **HG1**      Method: **SW7471**

MBLK		Sample ID: MBLK-51743-51743				Units: mg/Kg		Analysis Date: 9/27/2013 04:31 PM		
Client ID:		Run ID: HG1_130927A				SeqNo: 2466069		Prep Date: 9/27/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      ND      0.020

LCS		Sample ID: LCS-51743-51743					Units: mg/Kg		Analysis Date: 9/27/2013 04:33 PM		
Client ID:			Run ID: HG1_130927A			SeqNo: 2466070		Prep Date: 9/27/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury      0.1814      0.020      0.1665      0      109      80-120      0

MS		Sample ID: 13091059-01CMS					Units: mg/Kg		Analysis Date: 9/27/2013 04:37 PM		
Client ID:			Run ID: HG1_130927A			SeqNo: 2466072		Prep Date: 9/27/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury      0.1566      0.015      0.1214      0.02744      106      75-125      0

MSD		Sample ID: 13091059-01CMSD				Units: mg/Kg		Analysis Date: 9/27/2013 04:39 PM		
Client ID:		Run ID: HG1_130927A			SeqNo: 2466073		Prep Date: 9/27/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.148      0.014      0.1138      0.02744      106      75-125      0.1566      5.66      35

The following samples were analyzed in this batch:

1309922-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51644**      Instrument ID **ICPMS2**      Method: **SW6020A**

MBLK		Sample ID: MBLK-51644-51644				Units: mg/Kg		Analysis Date: 9/25/2013 05:28 AM		
Client ID:		Run ID: ICPMS2_130924A				SeqNo: 2461874		Prep Date: 9/24/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      ND      0.25

LCS		Sample ID: LCS-51644-51644				Units: mg/Kg		Analysis Date: 9/25/2013 05:34 AM		
Client ID:		Run ID: ICPMS2_130924A				SeqNo: 2461875		Prep Date: 9/24/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      4.582      0.25      5      0      91.6      80-120      0

MS		Sample ID: 1309965-18AMS					Units: mg/Kg		Analysis Date: 9/25/2013 08:29 AM		
Client ID:			Run ID: ICPMS2_130924A			SeqNo: 2461917		Prep Date: 9/24/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Arsenic      10.49      1.9      7.587      3.129      97      75-125      0

MSD		Sample ID: 1309965-18AMSD				Units: mg/Kg		Analysis Date: 9/25/2013 08:35 AM		
Client ID:		Run ID: ICPMS2_130924A			SeqNo: 2461918		Prep Date: 9/24/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      10.53      2.0      7.899      3.129      93.7      75-125      10.49      0.415      25

The following samples were analyzed in this batch:

1309922-02A      1309922-03A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51649**      Instrument ID **ICPMS2**      Method: **SW6020A**      **(Dissolve)**

<b>DUP</b>		Sample ID: <b>1309922-02BDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/29/2013 02:17 AM</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>ICPMS2_130928A</b>				SeqNo: <b>2466821</b>		Prep Date: <b>9/25/2013</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	74.62	10	0	0	0	0-0	81.8	9.18		
Magnesium	8.844	4.0	0	0	0	0-0	9.524	7.4		
Sodium	39.32	4.0	0	0	0	0-0	45.08	13.6		

<b>DUP</b>		Sample ID: <b>1309922-02BDUP</b>				Units: <b>none</b>		Analysis Date: <b>9/28/2013</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>SAR_130928A</b>				SeqNo: <b>2467359</b>		Prep Date: <b>9/25/2013</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	1.146	0.010	0	0	0		1.257	9.21	50	

The following samples were analyzed in this batch:      | 1309922-01C      1309922-02B      |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51668**      Instrument ID **ICPMS2**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-51668-51668</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 03:22 AM</b>		
Client ID:		Run ID: <b>ICPMS2_130926A</b>				SeqNo: <b>2466289</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	ND	0.25								
Cadmium	0.00638	0.10								J
Copper	ND	0.25								
Lead	0.00208	0.25								J
Nickel	ND	0.25								
Zinc	0.02754	0.50								J

<b>MBLK</b>		Sample ID: <b>MBLK-51668-51668</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 12:54 PM</b>		
Client ID:		Run ID: <b>ICPMS2_130928A</b>				SeqNo: <b>2466455</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Chromium	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								

<b>LCS</b>		Sample ID: <b>LCS-51668-51668</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 03:28 AM</b>		
Client ID:		Run ID: <b>ICPMS2_130926A</b>				SeqNo: <b>2466290</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.824	0.25	5	0	96.5	80-120	0			
Cadmium	4.744	0.10	5	0	94.9	80-120	0			
Copper	4.68	0.25	5	0	93.6	80-120	0			
Lead	4.724	0.25	5	0	94.5	80-120	0			
Nickel	4.634	0.25	5	0	92.7	80-120	0			
Zinc	4.796	0.50	5	0	95.9	80-120	0			

<b>LCS</b>		Sample ID: <b>LCS-51668-51668</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 01:00 PM</b>		
Client ID:		Run ID: <b>ICPMS2_130928A</b>				SeqNo: <b>2466456</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.615	0.25	5	0	92.3	80-120	0			
Chromium	4.728	0.25	5	0	94.6	80-120	0			
Selenium	4.622	0.25	5	0	92.4	80-120	0			
Silver	4.825	0.25	5	0	96.5	80-120	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51668**      Instrument ID **ICPMS2**      Method: **SW6020A**

MS				Sample ID: <b>1309854-09BMS</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 03:15 PM</b>	
Client ID:		Run ID: <b>ICPMS2_130928A</b>			SeqNo: <b>2466516</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.367	0.34	6.748	0.1202	92.6	75-125	0			
Barium	17.05	0.34	6.748	8.944	120	75-125	0			
Cadmium	6.514	0.13	6.748	0.02186	96.2	75-125	0			
Chromium	8.306	0.34	6.748	1.937	94.4	75-125	0			
Copper	7.227	0.34	6.748	0.7725	95.7	75-125	0			
Lead	7.085	0.34	6.748	0.5264	97.2	75-125	0			
Nickel	7.713	0.34	6.748	1.424	93.2	75-125	0			
Selenium	6.272	0.34	6.748	0.05459	92.1	75-125	0			
Silver	6.427	0.34	6.748	0.002012	95.2	75-125	0			
Zinc	12.42	0.67	6.748	5.623	101	75-125	0			

MSD				Sample ID: <b>1309854-09BMSD</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/28/2013 03:20 PM</b>	
Client ID:		Run ID: <b>ICPMS2_130928A</b>			SeqNo: <b>2466517</b>		Prep Date: <b>9/25/2013</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.468	0.34	6.859	0.1202	92.6	75-125	6.367	1.58	25	
Barium	16.04	0.34	6.859	8.944	103	75-125	17.05	6.1	25	
Cadmium	6.568	0.14	6.859	0.02186	95.4	75-125	6.514	0.821	25	
Chromium	8.059	0.34	6.859	1.937	89.3	75-125	8.306	3.02	25	
Copper	7.133	0.34	6.859	0.7725	92.7	75-125	7.227	1.3	25	
Lead	7.112	0.34	6.859	0.5264	96	75-125	7.085	0.387	25	
Nickel	7.476	0.34	6.859	1.424	88.2	75-125	7.713	3.11	25	
Selenium	6.407	0.34	6.859	0.05459	92.6	75-125	6.272	2.14	25	
Silver	6.508	0.34	6.859	0.002012	94.9	75-125	6.427	1.25	25	
Zinc	11.67	0.69	6.859	5.623	88.2	75-125	12.42	6.16	25	

The following samples were analyzed in this batch:

1309922-01A      1309922-04A

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51620**      Instrument ID **SVMS7**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-51620-51620</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 06:36 PM</b>		
Client ID:		Run ID: <b>SVMS7_130924A</b>				SeqNo: <b>2462384</b>		Prep Date: <b>9/24/2013</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	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1289	0	1667	0	77.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1613	0	1667	0	96.8	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1361	0	1667	0	81.7	37-107	0			

LCS		Sample ID: <b>SLCSS1-51620-51620</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 06:58 PM</b>		
Client ID:		Run ID: <b>SVMS7_130924A</b>				SeqNo: <b>2462385</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	517.7	6.7	666.7	0	77.6	45-110	0			
Acenaphthylene	559	6.7	666.7	0	83.8	45-105	0			
Anthracene	595.7	6.7	666.7	0	89.3	55-105	0			
Benzo(a)anthracene	593.7	6.7	666.7	0	89	50-110	0			
Benzo(a)pyrene	676.3	6.7	666.7	0	101	50-110	0			
Benzo(b)fluoranthene	665.3	6.7	666.7	0	99.8	45-115	0			
Benzo(g,h,i)perylene	619.7	6.7	666.7	0	92.9	40-125	0			
Benzo(k)fluoranthene	660.3	6.7	666.7	0	99	45-115	0			
Chrysene	657	6.7	666.7	0	98.5	55-110	0			
Dibenzo(a,h)anthracene	597.7	6.7	666.7	0	89.6	40-125	0			
Fluoranthene	668	6.7	666.7	0	100	55-115	0			
Fluorene	572.3	6.7	666.7	0	85.8	50-110	0			
Indeno(1,2,3-cd)pyrene	685.7	6.7	666.7	0	103	40-120	0			
Naphthalene	514.3	6.7	666.7	0	77.1	40-105	0			
Pyrene	647	6.7	666.7	0	97	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1247	0	1667	0	74.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1657	0	1667	0	99.4	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1294	0	1667	0	77.7	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51620**      Instrument ID **SVMS7**      Method: **SW8270**

MS				Sample ID: 1309854-09B MS			Units: µg/Kg		Analysis Date: 9/24/2013 07:20 PM		
Client ID:			Run ID: SVMS7_130924A			SeqNo: 2462386		Prep Date: 9/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1005	13	1322	0	76	45-110	0				
Acenaphthylene	1075	13	1322	0	81.3	45-105	0				
Anthracene	1165	13	1322	0	88.1	55-105	0				
Benzo(a)anthracene	1190	13	1322	0	90	50-110	0				
Benzo(a)pyrene	1324	13	1322	0	100	50-110	0				
Benzo(b)fluoranthene	1349	13	1322	0	102	45-115	0				
Benzo(g,h,i)perylene	1114	13	1322	0	84.2	40-125	0				
Benzo(k)fluoranthene	1315	13	1322	0	99.4	45-115	0				
Chrysene	1292	13	1322	0	97.7	55-110	0				
Dibenzo(a,h)anthracene	1114	13	1322	0	84.3	40-125	0				
Fluoranthene	1254	13	1322	0	94.8	55-115	0				
Fluorene	1095	13	1322	0	82.8	50-110	0				
Indeno(1,2,3-cd)pyrene	1251	13	1322	0	94.6	40-120	0				
Naphthalene	990.9	13	1322	0	74.9	40-105	0				
Pyrene	1337	13	1322	0	101	45-125	0				
Surr: 2-Fluorobiphenyl	2422	0	3305	0	73.3	12-100	0				
Surr: 4-Terphenyl-d14	3365	0	3305	0	102	25-137	0				
Surr: Nitrobenzene-d5	2463	0	3305	0	74.5	37-107	0				

MSD				Sample ID: 1309854-09B MSD				Units: µg/Kg		Analysis Date: 9/24/2013 07:42 PM	
Client ID:			Run ID: SVMS7_130924A			SeqNo: 2462387		Prep Date: 9/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1025	13	1285	0	79.7	45-110	1005	1.93	30		
Acenaphthylene	1122	13	1285	0	87.3	45-105	1075	4.24	30		
Anthracene	1180	13	1285	0	91.8	55-105	1165	1.24	30		
Benzo(a)anthracene	1165	13	1285	0	90.6	50-110	1190	2.1	30		
Benzo(a)pyrene	1310	13	1285	0	102	50-110	1324	1.09	30		
Benzo(b)fluoranthene	1308	13	1285	0	102	45-115	1349	3.12	30		
Benzo(g,h,i)perylene	1240	13	1285	0	96.4	40-125	1114	10.7	30		
Benzo(k)fluoranthene	1267	13	1285	0	98.6	45-115	1315	3.68	30		
Chrysene	1279	13	1285	0	99.5	55-110	1292	0.997	30		
Dibenzo(a,h)anthracene	1185	13	1285	0	92.2	40-125	1114	6.13	30		
Fluoranthene	1314	13	1285	0	102	55-115	1254	4.64	30		
Fluorene	1137	13	1285	0	88.4	50-110	1095	3.78	30		
Indeno(1,2,3-cd)pyrene	1333	13	1285	0	104	40-120	1251	6.41	30		
Naphthalene	1018	13	1285	0	79.2	40-105	990.9	2.69	30		
Pyrene	1259	13	1285	0	97.9	45-125	1337	6.03	30		
Surr: 2-Fluorobiphenyl	2420	0	3213	0	75.3	12-100	2422	0.103	40		
Surr: 4-Terphenyl-d14	3123	0	3213	0	97.2	25-137	3365	7.48	40		
Surr: Nitrobenzene-d5	2536	0	3213	0	78.9	37-107	2463	2.91	40		

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

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Batch ID: **51620**      Instrument ID **SVMS7**      Method: **SW8270**

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

1309922-01A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51628**      Instrument ID **VMS6**      Method: **SW8260B**

<b>MBLK</b>		Sample ID: <b>MBLK-51628-51628</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 03:27 PM</b>		
Client ID:		Run ID: <b>VMS6_130924A</b>				SeqNo: <b>2462033</b>		Prep Date: <b>9/24/2013</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	1018	0	1000	0	102	70-130	0			
Surr: 4-Bromofluorobenzene	980	0	1000	0	98	70-130	0			
Surr: Dibromofluoromethane	1022	0	1000	0	102	70-130	0			
Surr: Toluene-d8	1010	0	1000	0	101	70-130	0			

<b>LCS</b>		Sample ID: <b>LCS-51628-51628</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/24/2013 02:11 PM</b>		
Client ID:		Run ID: <b>VMS6_130924A</b>				SeqNo: <b>2462032</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	968.5	30	1000	0	96.8	75-125	0			
Ethylbenzene	982.5	30	1000	0	98.2	75-125	0			
m,p-Xylene	1960	60	2000	0	98	80-125	0			
o-Xylene	970.5	30	1000	0	97	75-125	0			
Toluene	978.5	30	1000	0	97.8	70-125	0			
Xylenes, Total	2930	90	3000	0	97.7	75-125	0			
Surr: 1,2-Dichloroethane-d4	998.5	0	1000	0	99.8	70-130	0			
Surr: 4-Bromofluorobenzene	999.5	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	1020	0	1000	0	102	70-130	0			
Surr: Toluene-d8	997	0	1000	0	99.7	70-130	0			

<b>MS</b>		Sample ID: <b>1309893-04A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>9/26/2013 07:47 AM</b>		
Client ID:		Run ID: <b>VMS5_130925A</b>				SeqNo: <b>2463885</b>		Prep Date: <b>9/24/2013</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	957.5	30	1000	0	95.8	75-125	0			
Ethylbenzene	971.5	30	1000	0	97.2	75-125	0			
m,p-Xylene	1952	60	2000	0	97.6	80-125	0			
o-Xylene	991	30	1000	0	99.1	75-125	0			
Toluene	933	30	1000	0	93.3	70-125	0			
Xylenes, Total	2942	90	3000	0	98.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	995.5	0	1000	0	99.6	70-130	0			
Surr: 4-Bromofluorobenzene	1028	0	1000	0	103	70-130	0			
Surr: Dibromofluoromethane	993.5	0	1000	0	99.4	70-130	0			
Surr: Toluene-d8	992	0	1000	0	99.2	70-130	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51628** Instrument ID **VMS6** Method: **SW8260B**

MSD				Sample ID: 1309893-04A MSD				Units: µg/Kg		Analysis Date: 9/26/2013 08:10 AM	
Client ID:			Run ID: VMS5_130925A			SeqNo: 2463887		Prep Date: 9/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	973	30	1000	0	97.3	75-125	957.5	1.61	30		
Ethylbenzene	983	30	1000	0	98.3	75-125	971.5	1.18	30		
m,p-Xylene	1963	60	2000	0	98.2	80-125	1952	0.588	30		
o-Xylene	1010	30	1000	0	101	75-125	991	1.9	30		
Toluene	937.5	30	1000	0	93.8	70-125	933	0.481	30		
Xylenes, Total	2973	90	3000	0	99.1	75-125	2942	1.03	30		
Surr: 1,2-Dichloroethane-d4	993	0	1000	0	99.3	70-130	995.5	0.251	30		
Surr: 4-Bromofluorobenzene	1022	0	1000	0	102	70-130	1028	0.537	30		
Surr: Dibromofluoromethane	991.5	0	1000	0	99.2	70-130	993.5	0.202	30		
Surr: Toluene-d8	1000	0	1000	0	100	70-130	992	0.803	30		

The following samples were analyzed in this batch: 1309922-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51642**      Instrument ID **WETCHEM**      Method: **SW9045D**

LCS		Sample ID: LCS-51642-51642				Units: s.u.		Analysis Date: 9/24/2013 02:00 PM		
Client ID:		Run ID: WETCHEM_130924J				SeqNo: 2461502		Prep Date: 9/24/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH      3.92      0      4      0      98      90-110      0

DUP		Sample ID: 1309924-01B DUP					Units: s.u.		Analysis Date: 9/24/2013 02:00 PM		
Client ID:			Run ID: WETCHEM_130924J			SeqNo: 2461510		Prep Date: 9/24/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH      9.46      0      0      0      0      0-0      9.29      1.81      20

The following samples were analyzed in this batch:

1309922-01A      1309922-02A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **51649** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

<b>DUP</b>		Sample ID: <b>1309922-02B DUP</b>				Units: <b>mmhos/cm @25°</b>		Analysis Date: <b>9/25/2013 06:45 PM</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>WETCHEM_130925N</b>				SeqNo: <b>2463084</b>		Prep Date: <b>9/25/2013</b>		DF: <b>5</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.6605	0.025	0	0	0		0.708	6.94	50	

The following samples were analyzed in this batch:

1309922-01C 1309922-02B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

# QC BATCH REPORT

Batch ID: **51760**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-51760-51760</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2013 03:15 PM</b>		
Client ID:		Run ID: <b>WETCHEM_130927E</b>		SeqNo: <b>2465985</b>		Prep Date: <b>9/27/2013</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      0.50

<b>LCS</b>		Sample ID: <b>LCS-51760-51760</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2013 03:15 PM</b>		
Client ID:		Run ID: <b>WETCHEM_130927E</b>		SeqNo: <b>2465986</b>		Prep Date: <b>9/27/2013</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      2.024      0.50      2      0      101      80-120      0

<b>MS</b>		Sample ID: <b>1309922-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2013 03:15 PM</b>		
Client ID: <b>Drill Cuttings</b>		Run ID: <b>WETCHEM_130927E</b>		SeqNo: <b>2465988</b>		Prep Date: <b>9/27/2013</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      1.26      0.50      2      0.03922      61      75-125      0      S

<b>MS</b>		Sample ID: <b>1309922-01A MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2013 03:15 PM</b>		
Client ID: <b>Drill Cuttings</b>		Run ID: <b>WETCHEM_130927E</b>		SeqNo: <b>2465990</b>		Prep Date: <b>9/27/2013</b>		DF: <b>100</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      998.8      49      1322      0.03922      75.5      75-125      0

<b>MSD</b>		Sample ID: <b>1309922-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2013 03:15 PM</b>		
Client ID: <b>Drill Cuttings</b>		Run ID: <b>WETCHEM_130927E</b>		SeqNo: <b>2465989</b>		Prep Date: <b>9/27/2013</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      1.245      0.49      1.976      0.03922      61      75-125      1.26      1.19      20      S

The following samples were analyzed in this batch:

1309922-01A

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **R127248**      Instrument ID **MOIST**      Method: **A2540 G**

MBLK				Sample ID: WBLKS-R127248				Units: % of sample			Analysis Date: 9/23/2013 06:45 PM			
Client ID:				Run ID: MOIST_130923E				SeqNo: 2461460			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-R127248				Units: % of sample		Analysis Date: 9/23/2013 06:45 PM		
Client ID:		Run ID: MOIST_130923E			SeqNo: 2461456		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: 1309912-01B DUP				Units: % of sample			Analysis Date: 9/23/2013 06:45 PM			
Client ID:				Run ID: MOIST_130923E				SeqNo: 2461443			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Moisture	3.73	0.050	0	0	0	0-0	3.32	11.6	20					

DUP		Sample ID: 1309922-04A DUP					Units: % of sample		Analysis Date: 9/23/2013 06:45 PM		
Client ID: BKGD 3			Run ID: MOIST_130923E			SeqNo: 2461454		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	8.46	0.050	0	0	0	0-0	7.59	10.8	20		

The following samples were analyzed in this batch:

1309922-02A	1309922-03A	1309922-04A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1309922  
**Project:** Koch Exploration -AHU Wyatt 25-43 9/18/13

## QC BATCH REPORT

Batch ID: **R127262**      Instrument ID **MOIST**      Method: **A2540 G**

MBLK				Sample ID: WBLKS-R127262				Units: % of sample			Analysis Date: 9/24/2013 12:50 PM			
Client ID:				Run ID: MOIST_130924D				SeqNo: 2462511			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-R127262					Units: % of sample		Analysis Date: 9/24/2013 12:50 PM		
Client ID:			Run ID: MOIST_130924D			SeqNo: 2462507		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

<b>DUP</b>				Sample ID: <b>1309965-01A DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>9/24/2013 12:50 PM</b>			
Client ID:				Run ID: <b>MOIST_130924D</b>				SeqNo: <b>2462476</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      6.79      0.050      0      0      0      0-0      7.45      9.27      20

<b>DUP</b>				Sample ID: <b>1309965-11A DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>9/24/2013 12:50 PM</b>			
Client ID:				Run ID: <b>MOIST_130924D</b>				SeqNo: <b>2462498</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      8.35      0.050      0      0      0      0-0      8.14      2.55      20

The following samples were analyzed in this batch:

1309922-01A

**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  
#

1309922

PROJECT NAME		Gunnison Energy - AHU Wyatt 25-43		SAMPLER		Kris Rowe		DATE		9/18/2013		PAGE		1 of 2	
PROJECT No.				SITE ID		AHU Wyatt 25-43 Well Pad		TURNAROUND		STD		DISPOSAL		By Lab or Return to Client	
EDD FORMAT				PURCHASE ORDER											
COMPANY NAME		HRL COMPLIANCE SOLUTIONS Inc.		BILL TO COMPANY		HRL									
SEND REPORT TO		KRIS ROWE		INVOICE ATTN TO											
ADDRESS		2385 F 1/2 RD		ADDRESS											
CITY / STATE / ZIP		GRAND JUNCTION CO 81505		CITY / STATE / ZIP											
PHONE		970-243-3271		PHONE											
FAX		970-243-3280		FAX											
E-MAIL		KROWE@HRLCOMP.COM		E-MAIL											
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO	GRO	BTEX	SEMI VOLS - PAH	910-1 METALS	SAR / EC / pH	Arsenic	
1	Drill Cuttings	S	9/18/2013	12:00	3	8		X	X	X	X	X	X		
2	BKGD 1	S	↓	12:10	2	8							X	X	
3	BKGD 2	S	↓	12:15	1	8							X	X	
4	BKGD 3	S	↓	12:20	1	8							X	X	

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

For metals or anions, please detail analytes below.

Comments:	4.4°C	QC PACKAGE (check below)
		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
	Kris Rowe	9/20/2013	17:00
RELINQUISHED BY	RECEIVED BY		
	Diane F. Shaw	9/21/13	0900
RELINQUISHED BY	RECEIVED BY		
RELINQUISHED BY	RECEIVED BY		
RELINQUISHED BY	RECEIVED BY		

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 21-Sep-13 09:00

Work Order: 1309922

Received by: DS

Checklist completed by Diane Shaw 23-Sep-13  
eSignature Date

Reviewed by: Ann Preston 01-Oct-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"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.4 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>9/23/2013 10:55:48 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** NEW Package  
Express US Airbill

FedEx  
Tracking  
Number

8022 0273 1608

1 From

Date 9/20/13

Phone

Sender's  
Name

Kris Rowe

Company

HRL Compliance Solutions

Address

2385 F 1/2

City

Grand Junction

State CO

ZIP 81505

2 Your Internal Billing Reference

To Recipient's  
Name

Samir Reelwing

Company

ALS Group Laboratory

Address

3352 128th AVE

Phone

616 399 6070



ALS Environmental  
3352 128th Avenue  
Holland, Michigan 49424  
Tel: +1 616 399 6070  
Fax: +1 616 399 6185

Form ID No. 0200

4 Express Package Service

NOTE: Service order has changed. Please select carefully.

Next Business Day

- ☒ FedEx First Overnight  
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Priority Overnight  
Next business morning. \* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight  
Next business afternoon. \* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M.  
Second business morning. \* Saturday Delivery NOT available.
- ☐ FedEx 2Day  
Second business afternoon. \* Thursday shipment will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver  
Third business day. \* Saturday Delivery NOT available.

5 Packaging

\* Declared value limit \$500.

- ☐ FedEx Envelope\*
- ☐ FedEx Pak\*
- ☐ FedEx Box
- ☐ FedEx Tube

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required  
Packets only. \* Not available for FedEx First Overnight.

☐ Direct Signature  
Someone at recipient's address may sign for delivery. \* No applies.

☐ Indirect Signature  
If no one is available at a home address, options at a business address may sign for delivery. \* Residential deliveries only.

☐ Dry Ice  
Dry Ice 9 UN 1845

☐ Cargo Aircraft Only

☐ Credit Card

☐ Cash

Seal Broken By:

Seal

Date

Time

Signature

Signature

Signature

Signature

Signature

Signature

Signature

SDR