

August 20, 2020

**Rocky Mountain Natural Gas, LLC**  
**Wolf Creek #9 Retirement Building Footprint**  
**Remediation Summary**

**Introduction**

This report presents the site background, remediation activities, disposal, analytical results summary, and conclusion for the Wolf Creek #9 Retirement Building remediation. Field work was conducted on July 27, and August 3, 2020.

The objective of the remediation was to excavate and dispose of the previously identified area of contaminated soils beneath the retirement building footprint. All remediation and sampling activities were conducted in accordance with the approved Remediation Workplan dated July 2020.

**Site Location**

The Wolf Creek #9 well pad is located approximately 10,163 feet above sea level in the NE ¼, SW ¼, of Section 36, Township 8 South, Range 90 West of the 6<sup>th</sup> Prime Meridian in the White River National Forest of Pitkin County, Colorado (39.312831, -107.395531). Refer to Appendix A, Figure 1 for a Wolf Creek Storage Unit site location map.

**Background**

HRL Compliance Solutions, Inc. (HRL) was contracted by Rocky Mountain Natural Gas, LLC (RMNG) to conduct a site characterization of the Wolf Creek #9 retirement building footprint. Site characterization activities were conducted in June of 2020. A total of nine (9) soil borings were advanced within the former building footprint. After the site characterization was completed and the impacted area was identified, HRL recommended that the soil from the impacted area be excavated and disposed of at Green Leaf Environmental Services in De Beque, Colorado.

**Remediation**

Excavation of impacted soil was conducted on July 27 and August 3, 2020. HRL personnel were onsite at all times to oversee the remediation, direct excavation activities, collect confirmation soil samples, and document all onsite activities. The area of contamination identified during the site characterization was marked onsite prior to commencement of the excavation. A track hoe was utilized for all excavation activities. Excavation, as outlined in the remediation workplan, was conducted around the location of BH 16 where contaminated soil was observed during the site characterization.

Over the two (2) day period, approximately 125 cubic yards of contaminated soil was excavated. All excavated soil was placed onto a plastic liner, bermed, and covered with plastic. The excavation

(remediated) area encompassed an area of approximately 374 square feet to a depth of approximately nine (9) feet. Refer to Appendix A, Figure 2 for a GIS map of the excavation.

A disposal profile was submitted to Greenleaf Environmental Services for disposal. Upon approval, all the contaminated soil was loaded into dump trucks and transported to Green Leaf facility on August 10, 2020. The Green Leaf facility is located at 15655 45 ½ Road outside of De Beque, Colorado. The contaminated soil was disposed of in accordance with the approved waste management profile.

### **Sampling Procedures**

In accordance with the approved remediation workplan, confirmation soil samples were collected from the bottom and side walls of the excavation. Side wall samples were collected at a depth centered vertically and horizontally from each side wall, approximately 4.5 feet below the ground surface (bgs). The bottom sample was collected at the center point of the excavation at a depth approximately nine (9) feet bgs. All samples were analyzed for methanol and mercury in accordance with the approved Remediation Workplan dated July 2020.

Each sample was placed into laboratory provided containers, packed in ice, and shipped for overnight delivery to ALS Environmental in Holland, Michigan following laboratory chain-of-custody protocol. Sample locations are presented in Appendix A, Figure 2.

Due to safety concerns, onsite personnel were not allowed to enter the excavation and all samples were collected from the track hoe bucket. The bucket was thoroughly examined and cleaned between sample locations and sampling procedures were conducted in a manner to ensure that no cross contamination occurred between sample points.

### **Analytical Results Summary**

On July 27, 2020 a total of five (5) soil samples were collected and submitted to ALS Environmental for laboratory analysis. Each sample was analyzed for methanol and mercury per the approved Remediation Workplan dated July 2020.

#### **North Wall**

Analytical results from the north wall reported a methanol concentration of 0.38 mg/kg, which is below the 2014 Bureau of Land Management (BLM), United States Forest Service (USFS) and RMNG agreed upon standard of 9 mg/kg.

Mercury results for the north wall were non-detect.

#### **South Wall**

Methanol results for the south wall were non-detect.

Analytical results for the south wall reported a mercury concentration of 250 mg/kg, which exceeds the COGCC Table 910-1 standard of 23 mg/kg for mercury in soil.

#### East Wall

Analytical results for the east wall reported a methanol concentration of 13 mg/kg, which exceeds the BLM, USFS and RMNG agreed upon standard of 9 mg/kg for methanol in soil.

Analytical results for the east wall reported a mercury concentration of 0.15 mg/kg, which is below the COGCC Table 910-1 standard of 23 mg/kg for mercury in soil.

#### West Wall

Methanol results for the west wall were non-detect.

Analytical results for the west wall reported a mercury concentration of 0.24 mg/kg, which is below the COGCC Table 910-1 standard of 23 mg/kg for mercury in soil.

#### Bottom

Methanol results for the bottom were non-detect.

Analytical results for the bottom reported a mercury concentration of 0.85 mg/kg, which is below the COGCC Table 910-1 standard of 23 mg/kg for mercury in soil.

Results from the initial sample event conducted on July 27, 2020 indicated that the south wall still exhibited elevated concentrations of mercury and the east wall exhibited elevated concentrations of methanol. On August 3, 2020, additional excavation and sampling was conducted. The south wall was excavated an additional ten (10) feet to the south and the east wall was excavated an additional five (5) feet to the east. Once the additional excavation was completed, HRL personnel collected confirmation samples from south and east walls. Samples were collected in the same manner as the July 27 sample event. The south wall was analyzed for mercury and the east wall was analyzed for methanol. Refer to Appendix A, Figure 2 for a sample location map.

Analytical results from the south wall reported a mercury concentration of 7.2 mg/kg, which is below the COGCC Table 910-1 standard of 23 mg/kg for mercury in soil.

Analytical results from the east wall were non-detect for methanol.

Analytical laboratory results are summarized in Appendix B, Table 1. Raw laboratory analytical data is presented in Appendix C.

All additional excavated soil was added to the existing soil stockpile for disposal.

Upon receiving confirmation results indicating that all contaminated soil had been successfully removed from the retirement building footprint location, the open excavation was backfilled with clean native fill material and restored to its original grade.

### **Conclusion**

Based on laboratory analytical results all impacted soil within the area of the Wolf Creek #9 retirement building footprint has been successfully remediated. All impacted soil has been properly disposed of at Green Leaf Environmental Services. No additional remediation or soil sampling will be required.

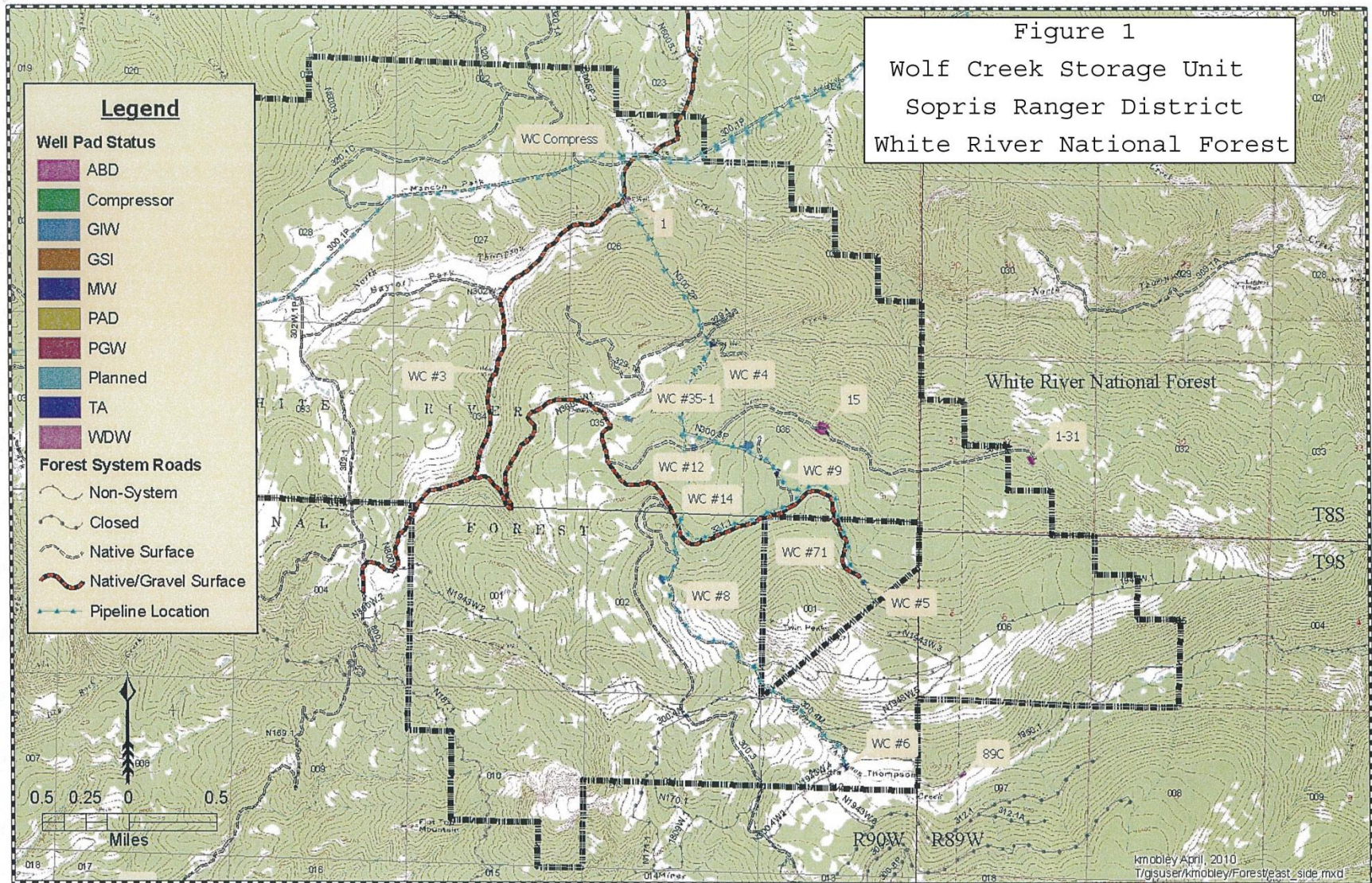
# **Appendix A**

**Figure 1: Wolf Creek Storage Unit Map**

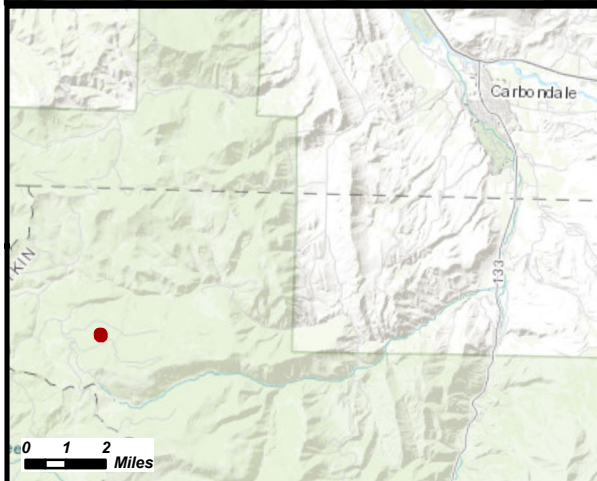
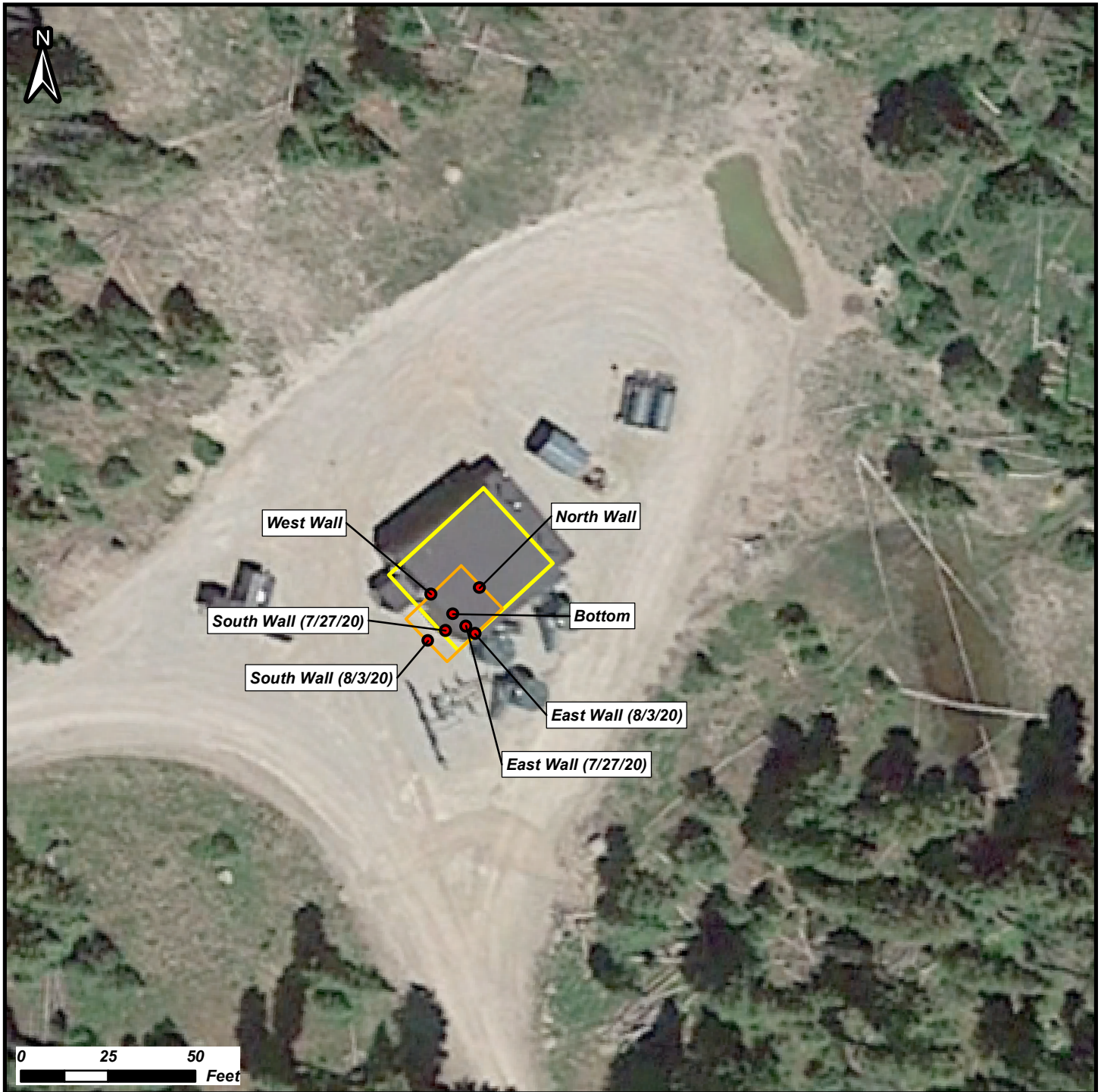
**Figure 2: Soil Boring Map**



Figure 1: Wolf Creek Storage Unit Map







## Retirement Building Sample Location Map

Excavation Area

39.313040533, -107.395388501  
Section 36, Township 8 South, Range 90 West

### NOTES / COMMENTS:

The excavation area is approximately 374 square feet.

### Mapped Features

- Sample Location
- Excavation Area
- Retirement Building Footprint

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



**HRL**  
**COMPLIANCE**  
**SOLUTIONS**

Author: A. Asay
Revision: 1
Date: 8/17/2020

# Appendix B

## Table 1



Black Hills - Wolf Creek 9 Remediation - Retirement Building Footprint	Soil Analysis	Exceeds Standard	ND = Non Detect	Method	SW8015M	SW 7471B	SW3550C
		NS = Not Sampled		Analyte	Methanol*	Mercury	Moisture
				Units	mg/Kg-dry	mg/kg-dry	% of Sample
				COGCC Table 910-1 Standards	N/A	23	N/A
Sample ID	Matrix	Sample Date	Lab Sample ID #	CSEV Standards	N/A	N/A	N/A
North Wall	Soil	7/27/2020	20072088-01		0.38	ND	30
South Wall	Soil	7/27/2020	20072088-02		ND	250	24
South Wall	Soil	8/3/2020	20080141-01		NS	7.2	25
East Wall	Soil	7/27/2020	20072088-03		13	0.15	28
East Wall	Soil	8/3/2020	20080141-02		ND	NS	25
West Wall	Soil	7/27/2020	20072088-04		ND	0.24	25
Bottom	Soil	7/27/2020	20072088-05		ND	0.85	24

\* BLM agreed upon standard of 9 mg/kg

COGCC - Colorado Oil and Gas Conservation Commission

CSEV - Colorado Soil Evaluation Values

# **Appendix C**

## **Laboratory Analytical Reports**



30-Jul-2020

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

Re: **RMNG-Wolf Creek 9 Retirement Building Remediation**

Work Order: **20072088**

Dear Mark,

ALS Environmental received 5 samples on 28-Jul-2020 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 13.

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

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

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

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

### Report of Laboratory Analysis

Certificate No: MN 026-999-449

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, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Work Order:** 20072088

---

**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>
20072088-01	North Wall	Soil		7/27/2020 09:12	7/28/2020 10:00	<input type="checkbox"/>
20072088-02	South Wall	Soil		7/27/2020 08:51	7/28/2020 10:00	<input type="checkbox"/>
20072088-03	East Wall	Soil		7/27/2020 09:02	7/28/2020 10:00	<input type="checkbox"/>
20072088-04	West Wall	Soil		7/27/2020 08:56	7/28/2020 10:00	<input type="checkbox"/>
20072088-05	Bottom	Soil		7/27/2020 08:48	7/28/2020 10:00	<input type="checkbox"/>

---



**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**WorkOrder:** 20072088

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<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
TNTC	Too Numerous To Count
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

**ALS Group, USA****Date:** 30-Jul-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** North Wall  
**Collection Date:** 7/27/2020 09:12 AM

**Work Order:** 20072088  
**Lab ID:** 20072088-01  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 7/28/20 17:00	Analyst: <b>KYM</b>
Methanol	ND		6.8	mg/Kg-dry	1	7/28/2020 11:28 PM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 7/29/20 10:10	Analyst: <b>MAC</b>
Mercury	0.38		0.025	mg/Kg-dry	1	7/29/2020 11:45 AM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	30		0.10	% of sample	1	7/29/2020 02:07 PM

---

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

**ALS Group, USA****Date:** 30-Jul-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** South Wall  
**Collection Date:** 7/27/2020 08:51 AM

**Work Order:** 20072088  
**Lab ID:** 20072088-02  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 7/28/20 17:00	Analyst: <b>KYM</b>
Methanol	ND		6.3	mg/Kg-dry	1	7/28/2020 11:42 PM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 7/29/20 10:10	Analyst: <b>MAC</b>
Mercury	250		23	mg/Kg-dry	1000	7/29/2020 12:30 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	24		0.10	% of sample	1	7/29/2020 02:07 PM

---

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

**ALS Group, USA****Date:** 30-Jul-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** East Wall  
**Collection Date:** 7/27/2020 09:02 AM

**Work Order:** 20072088  
**Lab ID:** 20072088-03  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 7/28/20 17:00	Analyst: <b>KYM</b>
Methanol	13		6.6	mg/Kg-dry	1	7/28/2020 11:56 PM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 7/29/20 10:10	Analyst: <b>MAC</b>
Mercury	0.15		0.023	mg/Kg-dry	1	7/29/2020 12:00 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	28		0.10	% of sample	1	7/29/2020 02:07 PM

---

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



**ALS Group, USA****Date:** 30-Jul-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** West Wall  
**Collection Date:** 7/27/2020 08:56 AM

**Work Order:** 20072088  
**Lab ID:** 20072088-04  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 7/28/20 17:00	Analyst: <b>KYM</b>
Methanol	ND		6.4	mg/Kg-dry	1	7/29/2020 12:10 AM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 7/29/20 10:10	Analyst: <b>MAC</b>
Mercury	0.24		0.021	mg/Kg-dry	1	7/29/2020 12:02 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	25		0.10	% of sample	1	7/29/2020 02:07 PM

---

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

**ALS Group, USA****Date:** 30-Jul-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** Bottom  
**Collection Date:** 7/27/2020 08:48 AM

**Work Order:** 20072088  
**Lab ID:** 20072088-05  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 7/28/20 17:00	Analyst: <b>KYM</b>
Methanol	ND		6.3	mg/Kg-dry	1	7/29/2020 12:24 AM
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 7/29/20 10:10	Analyst: <b>MAC</b>
Mercury	0.85		0.10	mg/Kg-dry	5	7/29/2020 12:25 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	24		0.10	% of sample	1	7/29/2020 02:07 PM

---

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

**Client:** HRL Compliance Solutions, Inc

**Work Order:** 20072088

**Project:** RMNG-Wolf Creek 9 Retirement Building Remedia

## QC BATCH REPORT

Batch ID: **160798**

Instrument ID **GC5**

Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>MBLK-160798-160798</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/28/2020 11:00 PM</b>		
Client ID:		Run ID: <b>GC5_200728A</b>				SeqNo: <b>6595314</b>		Prep Date: <b>7/28/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	ND	5.0								

<b>LCS</b>		Sample ID: <b>LCS-160798-160798</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/28/2020 10:04 PM</b>		
Client ID:		Run ID: <b>GC5_200728A</b>				SeqNo: <b>6595311</b>		Prep Date: <b>7/28/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	526.6	5.0	500	0	105	50-150	0			

<b>MS</b>		Sample ID: <b>20072087-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/28/2020 10:18 PM</b>		
Client ID:		Run ID: <b>GC5_200728A</b>				SeqNo: <b>6595312</b>		Prep Date: <b>7/28/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	478.7	4.8	484.5	0	98.8	50-150	0			

<b>MSD</b>		Sample ID: <b>20072087-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/28/2020 10:32 PM</b>		
Client ID:		Run ID: <b>GC5_200728A</b>				SeqNo: <b>6595313</b>		Prep Date: <b>7/28/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	462.8	4.8	483.6	0	95.7	50-150	478.7	3.39	30	

The following samples were analyzed in this batch:

20072088-01A	20072088-02A	20072088-03A
20072088-04A	20072088-05A	

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 20072088  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation

# QC BATCH REPORT

Batch ID: **160764**      Instrument ID **HG4**      Method: **SW7471B**

<b>MBLK</b>		Sample ID: <b>MBLK-160764-160764</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/29/2020 11:04 AM</b>		
Client ID:		Run ID: <b>HG4_200729A</b>				SeqNo: <b>6595007</b>		Prep Date: <b>7/29/2020</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-160764-160764</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/29/2020 11:06 AM</b>		
Client ID:		Run ID: <b>HG4_200729A</b>				SeqNo: <b>6595008</b>		Prep Date: <b>7/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1542      0.020      0.1665      0      92.6      80-120      0

<b>MS</b>		Sample ID: <b>20071915-12AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/29/2020 11:35 AM</b>		
Client ID:		Run ID: <b>HG4_200729A</b>				SeqNo: <b>6595024</b>		Prep Date: <b>7/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1827      0.017      0.1437      0.03836      100      75-125      0

<b>MSD</b>		Sample ID: <b>20071915-12AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/29/2020 11:36 AM</b>		
Client ID:		Run ID: <b>HG4_200729A</b>				SeqNo: <b>6595025</b>		Prep Date: <b>7/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1845      0.017      0.1446      0.03836      101      75-125      0.1827      0.97      35

The following samples were analyzed in this batch:

20072088-01A	20072088-02A	20072088-03A
20072088-04A	20072088-05A	

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



**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 20072088  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation

# QC BATCH REPORT

Batch ID: **R294995**      Instrument ID **MOIST**      Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R294995</b>				Units: % of sample		Analysis Date: <b>7/29/2020 02:07 PM</b>		
Client ID:		Run ID: <b>MOIST_200729B</b>				SeqNo: <b>6597940</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	0.10								

<b>LCS</b>		Sample ID: <b>LCS-R294995</b>				Units: % of sample		Analysis Date: <b>7/29/2020 02:07 PM</b>		
Client ID:		Run ID: <b>MOIST_200729B</b>				SeqNo: <b>6597939</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	0.10	100	0	100	98-102	0			

<b>DUP</b>		Sample ID: <b>20072124-01A DUP</b>				Units: % of sample		Analysis Date: <b>7/29/2020 02:07 PM</b>		
Client ID:		Run ID: <b>MOIST_200729B</b>				SeqNo: <b>6597930</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.91	0.10	0	0	0	0-0	14.04	0.93	10	

<b>DUP</b>		Sample ID: <b>20072138-02B DUP</b>				Units: % of sample		Analysis Date: <b>7/29/2020 02:07 PM</b>		
Client ID:		Run ID: <b>MOIST_200729B</b>				SeqNo: <b>6597934</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	5.49	0.10	0	0	0	0-0	5.25	4.47	10	

The following samples were analyzed in this batch:

20072088-01A	20072088-02A	20072088-03A
20072088-04A	20072088-05A	

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

## Chain-of-Custody

**WORKORDER**  
#

20072088

Form 202r8


PAGE 1 of 1

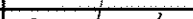


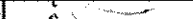
**DISPOSAL** ☒ **By Lab** or ☐ **Return to Client**

[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;">  </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		Casey Richardson	7/27/2020	1745
RECEIVED BY		N/M	7-27-20	1745
RELINQUISHED BY		N/M	7-27-20	1850
RECEIVED BY		M Gaylord	7-28-20	10:00
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 28-Jul-20 10:00

Work Order: 20072088

Received by: MJG

Checklist completed by Matthew Gaylord

28-Jul-20

Reviewed by: Chad Whelton

28-Jul-20

eSignature

Date

eSignature

Date

Matrices: Soil

Carrier name: FedEx

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

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

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

Chain of custody present? Yes ☒ No ☐

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

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

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

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

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 3.0/3.0C IR3

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 7/28/2020 2:40:31 PM

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

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

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



05-Aug-2020

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

Re: **RMNG-Wolf Creek 9 Retirement Building Remediation**

Work Order: **20080141**

Dear Mark,

ALS Environmental received 2 samples on 04-Aug-2020 11:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

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

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

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

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

## Report of Laboratory Analysis

Certificate No: MN 026-999-449

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, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Work Order:** 20080141

---

**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>
20080141-01	East Wall	Soil		8/3/2020 09:19	8/4/2020 11:30	<input type="checkbox"/>
20080141-02	South Wall	Soil		8/3/2020 09:11	8/4/2020 11:30	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**WorkOrder:** 20080141

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<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
TNTC	Too Numerous To Count
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

**ALS Group, USA****Date:** 05-Aug-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** East Wall  
**Collection Date:** 8/3/2020 09:19 AM

**Work Order:** 20080141  
**Lab ID:** 20080141-01  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>ORGANIC COMPOUNDS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW8015D 8/4/20 16:30	Analyst: <b>KYM</b>
Methanol	ND		6.5	mg/Kg-dry	1	8/4/2020 06:57 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	25		0.10	% of sample	1	8/4/2020 04:25 PM

---

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

**ALS Group, USA****Date:** 05-Aug-20

---

**Client:** HRL Compliance Solutions, Inc  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation  
**Sample ID:** South Wall  
**Collection Date:** 8/3/2020 09:11 AM

**Work Order:** 20080141  
**Lab ID:** 20080141-02  
**Matrix:** SOIL

---

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>MERCURY BY CVAA</b>			<b>SW7471B</b>		Prep: SW7471 8/5/20 10:10	Analyst: <b>MAC</b>
Mercury	7.2		0.48	mg/Kg-dry	20	8/5/2020 12:06 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>KTP</b>
Moisture	25		0.10	% of sample	1	8/4/2020 04:25 PM

---

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



**Client:** HRL Compliance Solutions, Inc

**Work Order:** 20080141

**Project:** RMNG-Wolf Creek 9 Retirement Building Remedia

## QC BATCH REPORT

Batch ID: **161081**

Instrument ID **GC5**

Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>MBLK-161081-161081</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/4/2020 06:43 PM</b>		
Client ID:		Run ID: <b>GC5_200804A</b>				SeqNo: <b>6611135</b>		Prep Date: <b>8/4/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	ND	5.0								

<b>LCS</b>		Sample ID: <b>LCS-161081-161081</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/4/2020 05:47 PM</b>		
Client ID:		Run ID: <b>GC5_200804A</b>				SeqNo: <b>6611132</b>		Prep Date: <b>8/4/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	512.2	5.0	500	0	102	50-150	0			

<b>MS</b>		Sample ID: <b>20080141-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/4/2020 06:01 PM</b>		
Client ID: <b>East Wall</b>		Run ID: <b>GC5_200804A</b>				SeqNo: <b>6611133</b>		Prep Date: <b>8/4/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	502.6	4.9	487.3	0	103	50-150	0			

<b>MSD</b>		Sample ID: <b>20080141-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/4/2020 06:15 PM</b>		
Client ID: <b>East Wall</b>		Run ID: <b>GC5_200804A</b>				SeqNo: <b>6611134</b>		Prep Date: <b>8/4/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	490.9	4.9	491.2	0	99.9	50-150	502.6	2.36	30	

The following samples were analyzed in this batch:

20080141-01A

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 20080141  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation

## QC BATCH REPORT

Batch ID: **161110**      Instrument ID **HG4**      Method: **SW7471B**

<b>MBLK</b>		Sample ID: <b>MBLK-161110-161110</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/5/2020 11:40 AM</b>		
Client ID:		Run ID: <b>HG4_200805A</b>				SeqNo: <b>6611230</b>		Prep Date: <b>8/5/2020</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      0      0.15      0      0-0      0

<b>LCS</b>		Sample ID: <b>LCS-161110-161110</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/5/2020 11:41 AM</b>		
Client ID:		Run ID: <b>HG4_200805A</b>				SeqNo: <b>6611231</b>		Prep Date: <b>8/5/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.15      0.020      0.1665      0      90.1      80-120      0

<b>MS</b>		Sample ID: <b>20072376-06BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/5/2020 11:45 AM</b>		
Client ID:		Run ID: <b>HG4_200805A</b>				SeqNo: <b>6611233</b>		Prep Date: <b>8/5/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.2174      0.018      0.1498      0.06811      99.7      75-125      0

<b>MSD</b>		Sample ID: <b>20072376-06BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/5/2020 11:47 AM</b>		
Client ID:		Run ID: <b>HG4_200805A</b>				SeqNo: <b>6611234</b>		Prep Date: <b>8/5/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.2198      0.018      0.1509      0.06811      101      75-125      0.2174      1.1      35

The following samples were analyzed in this batch:

20080141-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 20080141  
**Project:** RMNG-Wolf Creek 9 Retirement Building Remediation

## QC BATCH REPORT

Batch ID: **R295368**      Instrument ID **MOIST**      Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R295368</b>				Units: % of sample		Analysis Date: <b>8/4/2020 04:25 PM</b>		
Client ID:		Run ID: <b>MOIST_200804C</b>				SeqNo: <b>6610310</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	0.10								

<b>LCS</b>		Sample ID: <b>LCS-R295368</b>				Units: % of sample		Analysis Date: <b>8/4/2020 04:25 PM</b>		
Client ID:		Run ID: <b>MOIST_200804C</b>				SeqNo: <b>6610309</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	0.10	100	0	100	98-102	0			

<b>DUP</b>		Sample ID: <b>20080209-01A DUP</b>				Units: % of sample		Analysis Date: <b>8/4/2020 04:25 PM</b>		
Client ID:		Run ID: <b>MOIST_200804C</b>				SeqNo: <b>6610308</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	43.67	0.10	0	0	0	0-0	43.26	0.943	10	

The following samples were analyzed in this batch:

20080141-01A	20080141-02A
--------------	--------------

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



Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 04-Aug-20 11:30

Work Order: 20080141

Received by: DS

Checklist completed by Diane Shaw

04-Aug-20

Reviewed by: Chad Whelton

04-Aug-20

eSignature

Date

eSignature

Date

Matrices: Soil

Carrier name: FedEx

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

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

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

Chain of custody present? Yes ☒ No ☐

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

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

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

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

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 2.0/2.0 c IR3

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 8/4/2020 12:12:05 PM

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

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

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: