



17-Aug-2017

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

Re: **Laramie - Pond 13E and 13W Pit Solids Mgmt.**

Work Order: **1708642**

Dear Kris,

ALS Environmental received 1 sample on 10-Aug-2017 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 25.

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

Sincerely,

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

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

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Client: HRL Compliance Solutions, Inc
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.
Work Order: 1708642

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>
1708642-01	13E Pit Bottom - Sub-Liner	Soil		8/8/2017 14:50	8/10/2017 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.
Work Order: 1708642

Case Narrative

Batch 105749, Method ICP_6010_S, Sample 1708642-01A MS: The MS recoveries were above the upper control limits for Lead and Nickel. However, the MSD recoveries and the RPDs between the MS and MSD were within control limits. No qualification is required.

Batch 105749, Method ICP_6010_S, Sample 1708642-01A MS/MSD: The MS and MSD recovery was below the lower control limit for Copper. The corresponding result in the parent sample may be biased low.

Batch 105749, Method ICP_6010_S, Sample 1708642-01A MS/MSD: The MS and MSD recoveries were outside of the control limits for Barium and Chromium; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

Batch 105792, Method DRLVI_8015_S, Sample 1708642-01A MSD: The RPD between the MS and MSD was outside the control limit for DRO. The corresponding result in the parent sample should be considered estimated.

Batch 105818, Method CR6_7196_S, Sample 1708642-01A MS/MSD: The MS and MSD recovery was below the lower control limit for Hexavalent Chromium. The corresponding result in the parent sample may be biased low.

<u>Qualifier</u>	<u>Description</u>
*	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
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
mg/Kg	Milligrams per Kilogram
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

Date: 17-Aug-17

Client: HRL Compliance Solutions, Inc
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.
Sample ID: 13E Pit Bottom - Sub-Liner
Collection Date: 8/8/2017 02:50 PM

Work Order: 1708642
Lab ID: 1708642-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	220		SW8015C		Prep: SW3546 8/14/17 11:51	Analyst: KB
<i>Surr: 4-Terphenyl-d14</i>	<i>52.1</i>		<i>34-130</i>	<i>%REC</i>	<i>1</i>	8/15/2017 11:45 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	24		SW8015D		Prep: SW5035 8/11/17 13:42	Analyst: KB
<i>Surr: Toluene-d8</i>	<i>107</i>		<i>71-123</i>	<i>%REC</i>	<i>1</i>	8/12/2017 02:53 PM
MERCURY BY CVAA						
Mercury	ND		SW7471B		Prep: SW7471 8/15/17 12:39	Analyst: RSH
METALS ANALYSIS BY ICP						
Arsenic	19		SW846 6010C		Prep: SW3050B 8/11/17 12:30	Analyst: LR
Barium	720		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Cadmium	ND		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Chromium	63		0.82	mg/Kg-dry	1	8/11/2017 09:27 PM
Copper	19		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Lead	13		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Nickel	32		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Selenium	2.7		0.82	mg/Kg-dry	1	8/11/2017 09:27 PM
Silver	ND		0.41	mg/Kg-dry	1	8/11/2017 09:27 PM
Zinc	58		0.82	mg/Kg-dry	1	8/11/2017 09:27 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B 8/14/17 10:59	Analyst: LR
Calcium	110		5.0	mg/L	10	8/16/2017 12:56 AM
Magnesium	16		2.0	mg/L	10	8/16/2017 12:56 AM
Sodium	1,500		2.0	mg/L	10	8/16/2017 12:56 AM
SODIUM ADSORPTION RATIO						
			USDA H60 MET		Prep: USDA Method 20B 8/14/17 10:59	Analyst: LR
Sodium Adsorption Ratio	37		0.010	none	1	8/15/2017
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3546 8/11/17 14:56	Analyst: RM
Acenaphthene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Anthracene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Benzo(a)anthracene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Benzo(a)pyrene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Benzo(b)fluoranthene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Benzo(k)fluoranthene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Chrysene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Dibenzo(a,h)anthracene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Fluoranthene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM

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

ALS Group, USA

Date: 17-Aug-17

Client: HRL Compliance Solutions, Inc
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.
Sample ID: 13E Pit Bottom - Sub-Liner
Collection Date: 8/8/2017 02:50 PM

Work Order: 1708642
Lab ID: 1708642-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Indeno(1,2,3-cd)pyrene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Naphthalene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Pyrene	ND		0.046	mg/Kg-dry	1	8/14/2017 06:56 PM
Surr: 2-Fluorobiphenyl	29.7		20-140	%REC	1	8/14/2017 06:56 PM
Surr: 4-Terphenyl-d14	25.2		22-172	%REC	1	8/14/2017 06:56 PM
Surr: Nitrobenzene-d5	27.0		8-140	%REC	1	8/14/2017 06:56 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035	8/11/17 13:36	Analyst: LSY
Benzene	ND		0.030	mg/Kg	1	8/12/2017 12:16 PM
Ethylbenzene	ND		0.030	mg/Kg	1	8/12/2017 12:16 PM
m,p-Xylene	ND		0.060	mg/Kg	1	8/12/2017 12:16 PM
o-Xylene	ND		0.030	mg/Kg	1	8/12/2017 12:16 PM
Toluene	ND		0.030	mg/Kg	1	8/12/2017 12:16 PM
Xylenes, Total	ND		0.090	mg/Kg	1	8/12/2017 12:16 PM
Surr: 1,2-Dichloroethane-d4	99.7		70-130	%REC	1	8/12/2017 12:16 PM
Surr: 4-Bromofluorobenzene	107		70-130	%REC	1	8/12/2017 12:16 PM
Surr: Dibromofluoromethane	88.0		70-130	%REC	1	8/12/2017 12:16 PM
Surr: Toluene-d8	96.6		70-130	%REC	1	8/12/2017 12:16 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 MET	Prep: USDA Method 20B	8/14/17 10:59	Analyst: JB
Electrical Conductivity @ Saturation	9.3		0.050	mmhos/cm @2	10	8/15/2017 10:20 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: LW
Chromium, Trivalent	63		1.1	mg/Kg-dry	1	8/15/2017 03:55 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A	8/11/17 14:45	Analyst: LW
Chromium, Hexavalent	ND		1.1	mg/Kg-dry	1	8/14/2017 01:00 PM
MOISTURE			SW3550C			Analyst: BTG
Moisture	11		0.050	% of sample	1	8/15/2017 05:30 PM
PH			SW9045D	Prep: EXTRACT	8/11/17 13:00	Analyst: JB
pH	9.05		0.100	s.u.	1	8/11/2017 01:15 PM

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

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1708642

Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

Batch ID: 105727

Instrument ID GC8

Method: SW8015C

MBLK		Sample ID: DBLKS1-105727-105727				Units: mg/Kg		Analysis Date: 8/12/2017 11:22 AM		
Client ID:		Run ID: GC8_170811A				SeqNo: 4579374		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

ND

5.0

Surr: 4-Terphenyl-d14

3.35

0

3.33

0

101

34-130

0

LCS		Sample ID: DLCSS1-105727-105727				Units: mg/Kg		Analysis Date: 8/12/2017 11:51 AM		
Client ID:		Run ID: GC8_170811A				SeqNo: 4579375		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

321.8

5.0

333

0

96.6

65-122

0

Surr: 4-Terphenyl-d14

3.167

0

3.33

0

95.1

34-130

0

MS		Sample ID: 1708464-01A MS				Units: mg/Kg		Analysis Date: 8/12/2017 10:57 PM		
Client ID:		Run ID: GC8_170811A				SeqNo: 4579398		Prep Date: 8/11/2017		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

1845

48

322.7

1579

82.4

65-122

0

O

Surr: 4-Terphenyl-d14

2.261

0

3.227

0

70.1

34-130

0

MSD		Sample ID: 1708464-01A MSD				Units: mg/Kg		Analysis Date: 8/12/2017 11:27 PM		
Client ID:		Run ID: GC8_170811A				SeqNo: 4579399		Prep Date: 8/11/2017		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

1866

49

328

1579

87.7

65-122

1845

1.16

30

O

Surr: 4-Terphenyl-d14

2.462

0

3.28

0

75.1

34-130

2.261

8.52

30

The following samples were analyzed in this batch:

1708642-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105792** Instrument ID **GC8** Method: **SW8015C**

MBLK		Sample ID: DBLKS1-105792-105792				Units: mg/Kg		Analysis Date: 8/15/2017 09:49 AM		
Client ID:		Run ID: GC8_170815B				SeqNo: 4585238		Prep Date: 8/14/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	3.15	0	3.33	0	94.6	34-130	0			

LCS		Sample ID: DLCSS1-105792-105792				Units: mg/Kg		Analysis Date: 8/15/2017 10:18 AM		
Client ID:		Run ID: GC8_170815B				SeqNo: 4585242		Prep Date: 8/14/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	377	5.0	333	0	113	65-122	0			
Surr: 4-Terphenyl-d14	3.283	0	3.33	0	98.6	34-130	0			

MS		Sample ID: 1708642-01A MS				Units: mg/Kg		Analysis Date: 8/15/2017 10:47 AM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: GC8_170815B				SeqNo: 4585246		Prep Date: 8/14/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	561.8	5.0	330.8	199.4	110	65-122	0			
Surr: 4-Terphenyl-d14	2.483	0	3.308	0	75.1	34-130	0			

MSD		Sample ID: 1708642-01A MSD				Units: mg/Kg		Analysis Date: 8/15/2017 11:16 AM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: GC8_170815B				SeqNo: 4585247		Prep Date: 8/14/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	1217	5.0	331.3	199.4	307	65-122	561.8	73.7	30	SR
Surr: 4-Terphenyl-d14	2.62	0	3.313	0	79.1	34-130	2.483	5.34	30	

The following samples were analyzed in this batch: 1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105769** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-105769-105769				Units: µg/Kg-dry		Analysis Date: 8/11/2017 08:17 PM		
Client ID:		Run ID: GC9_170811B				SeqNo: 4579267		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	ND	5,000								
Surr: Toluene-d8	4942	0	5000	0	98.8	71-123	0			

LCS		Sample ID: LCS-105769-105769				Units: µg/Kg-dry		Analysis Date: 8/11/2017 06:48 PM		
Client ID:		Run ID: GC9_170811B				SeqNo: 4579265		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	610500	5,000	500000	0	122	71-123	0			
Surr: Toluene-d8	5210	0	5000	0	104	71-123	0			

MS		Sample ID: 1708694-01A MS				Units: µg/Kg-dry		Analysis Date: 8/12/2017 08:02 AM		
Client ID:		Run ID: GC9_170811B				SeqNo: 4579289		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	895500	6,900	690500	0	130	71-123	0			S
Surr: Toluene-d8	7587	0	6905	0	110	71-123	0			

MSD		Sample ID: 1708694-01A MSD				Units: µg/Kg-dry		Analysis Date: 8/12/2017 08:32 AM		
Client ID:		Run ID: GC9_170811B				SeqNo: 4579290		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	848600	6,900	690500	0	123	71-123	895500	5.39	30	
Surr: Toluene-d8	7573	0	6905	0	110	71-123	7587	0.182	30	

The following samples were analyzed in this batch: 1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105917** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-105917-105917				Units: mg/Kg		Analysis Date: 8/15/2017 01:56 PM		
Client ID:		Run ID: HG1_170815A				SeqNo: 4583906		Prep Date: 8/15/2017		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-105917-105917				Units: mg/Kg		Analysis Date: 8/15/2017 01:58 PM		
Client ID:		Run ID: HG1_170815A				SeqNo: 4583907		Prep Date: 8/15/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1767 0.020 0.1665 0 106 80-120 0

MS		Sample ID: 1708878-01AMS				Units: mg/Kg		Analysis Date: 8/15/2017 02:03 PM		
Client ID:		Run ID: HG1_170815A				SeqNo: 4583909		Prep Date: 8/15/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1546 0.017 0.1386 0.02897 90.7 75-125 0

MSD		Sample ID: 1708878-01AMSD				Units: mg/Kg		Analysis Date: 8/15/2017 02:06 PM		
Client ID:		Run ID: HG1_170815A				SeqNo: 4583910		Prep Date: 8/15/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1598 0.017 0.1376 0.02897 95.1 75-125 0.1546 3.27 35

The following samples were analyzed in this batch:

1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105717** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP				Sample ID: 1708638-01BDUP				Units: none			Analysis Date: 8/15/2017		
Client ID:				Run ID: SAR_170815A				SeqNo: 4583936		Prep Date: 8/14/2017		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Sodium Adsorption Ratio		51.38	0.010	0	0	0		45.07	13.1	50			

The following samples were analyzed in this batch:

1708642-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105749** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-105749-105749				Units: mg/Kg		Analysis Date: 8/11/2017 08:35 PM		
Client ID:		Run ID: ICP2_170811A				SeqNo: 4579812		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.03865	0.50								J
Chromium	0.01742	0.25								J
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS		Sample ID: LCS-105749-105749				Units: mg/Kg		Analysis Date: 8/11/2017 08:29 PM		
Client ID:		Run ID: ICP2_170811A				SeqNo: 4579811		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.023	0.25	5	0	100	80-120	0			
Barium	5.242	0.25	5	0	105	80-120	0			
Cadmium	5.188	0.50	5	0	104	80-120	0			
Chromium	5.569	0.25	5	0	111	80-120	0			
Copper	5.172	0.50	5	0	103	80-120	0			
Lead	5.848	0.25	5	0	117	80-120	0			
Nickel	5.189	0.25	5	0	104	80-120	0			
Selenium	4.71	0.50	5	0	94.2	80-120	0			
Silver	5.255	0.25	5	0	105	80-120	0			
Zinc	5.358	0.50	5	0	107	80-120	0			

MS		Sample ID: 1708642-01AMS				Units: mg/Kg		Analysis Date: 8/11/2017 09:48 PM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: ICP2_170811A				SeqNo: 4579823		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	22.29	0.37	7.331	16.71	76.1	75-125	0			
Barium	486.8	0.37	7.331	643.4	-2140	75-125	0			SO
Cadmium	8.664	0.73	7.331	0.3848	113	75-125	0			
Chromium	65.33	0.37	7.331	56.32	123	75-125	0			O
Copper	19.09	0.73	7.331	17.08	27.5	75-125	0			S
Lead	21.13	0.37	7.331	11.31	134	75-125	0			S
Nickel	43.02	0.37	7.331	28.43	199	75-125	0			S
Selenium	9.078	0.73	7.331	2.379	91.4	75-125	0			
Silver	7.687	0.37	7.331	-0.2912	109	75-125	0			
Zinc	60.53	0.73	7.331	51.91	118	75-125	0			O

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105749** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 1708642-01AMSD				Units: mg/Kg		Analysis Date: 8/11/2017 09:55 PM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: ICP2_170811A				SeqNo: 4579824		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	22.73	0.37	7.321	16.71	82.3	75-125	22.29	1.99	20	
Barium	588.5	0.37	7.321	643.4	-750	75-125	486.8	18.9	20	SO
Cadmium	8.659	0.73	7.321	0.3848	113	75-125	8.664	0.0626	20	
Chromium	73.9	0.37	7.321	56.32	240	75-125	65.33	12.3	20	SO
Copper	20.19	0.73	7.321	17.08	42.5	75-125	19.09	5.55	20	S
Lead	20.23	0.37	7.321	11.31	122	75-125	21.13	4.36	20	
Nickel	36.53	0.37	7.321	28.43	111	75-125	43.02	16.3	20	
Selenium	9.033	0.73	7.321	2.379	90.9	75-125	9.078	0.502	20	
Silver	7.72	0.37	7.321	-0.2912	109	75-125	7.687	0.432	20	
Zinc	60.09	0.73	7.321	51.91	112	75-125	60.53	0.733	20	O

The following samples were analyzed in this batch: 1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105726** Instrument ID **SVMS6** Method: **SW846 8270D**

MBLK				Sample ID: SBLKS1-105726-105726				Units: µg/Kg			Analysis Date: 8/11/2017 04:48 PM		
Client ID:			Run ID: SVMS6_170811A				SeqNo: 4580265			Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	ND	42											
Anthracene	ND	42											
Benzo(a)anthracene	ND	42											
Benzo(a)pyrene	ND	42											
Benzo(b)fluoranthene	ND	42											
Benzo(k)fluoranthene	ND	42											
Chrysene	ND	42											
Dibenzo(a,h)anthracene	ND	42											
Fluoranthene	ND	42											
Fluorene	ND	42											
Indeno(1,2,3-cd)pyrene	ND	42											
Naphthalene	ND	42											
Pyrene	ND	42											
Surr: 2-Fluorobiphenyl	3252	0	3333	0	97.6	20-140	0						
Surr: 4-Terphenyl-d14	3828	0	3333	0	115	22-172	0						
Surr: Nitrobenzene-d5	3138	0	3333	0	94.2	8-140	0						

LCS				Sample ID: SLCSS1-105726-105726				Units: µg/Kg		Analysis Date: 8/11/2017 05:01 PM	
Client ID:			Run ID: SVMS6_170811A			SeqNo: 4580266		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1183	42	1333	0	88.7	40-140	0				
Anthracene	1356	42	1333	0	102	40-140	0				
Benzo(a)anthracene	1249	42	1333	0	93.7	40-140	0				
Benzo(a)pyrene	1355	42	1333	0	102	40-140	0				
Benzo(b)fluoranthene	1402	42	1333	0	105	40-140	0				
Benzo(k)fluoranthene	1444	42	1333	0	108	40-140	0				
Chrysene	1254	42	1333	0	94.1	40-140	0				
Dibenzo(a,h)anthracene	770.1	42	1333	0	57.8	40-140	0				
Fluoranthene	1368	42	1333	0	103	40-140	0				
Fluorene	1395	42	1333	0	105	40-140	0				
Indeno(1,2,3-cd)pyrene	1102	42	1333	0	82.6	40-140	0				
Naphthalene	1335	42	1333	0	100	40-140	0				
Pyrene	1313	42	1333	0	98.5	40-140	0				
<i>Surr: 2-Fluorobiphenyl</i>	3498	0	3333	0	105	20-140	0				
<i>Surr: 4-Terphenyl-d14</i>	3697	0	3333	0	111	22-172	0				
<i>Surr: Nitrobenzene-d5</i>	3376	0	3333	0	101	8-140	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105726** Instrument ID **SVMS6** Method: **SW846 8270D**

MS				Sample ID: 1708468-08C MS			Units: µg/Kg		Analysis Date: 8/11/2017 06:50 PM	
Client ID:				Run ID: SVMS6_170811A			SeqNo: 4580270		Prep Date: 8/11/2017	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1048	40	1265	0	82.8	40-140	0			
Anthracene	1239	40	1265	0	97.9	40-140	0			
Benzo(a)anthracene	1144	40	1265	0	90.4	40-140	0			
Benzo(a)pyrene	1245	40	1265	0	98.4	40-140	0			
Benzo(b)fluoranthene	1215	40	1265	0	96	40-140	0			
Benzo(k)fluoranthene	1238	40	1265	0	97.9	40-140	0			
Chrysene	1117	40	1265	0	88.3	40-140	0			
Dibenzo(a,h)anthracene	731.6	40	1265	0	57.8	40-140	0			
Fluoranthene	1233	40	1265	0	97.5	40-140	0			
Fluorene	1274	40	1265	0	101	40-140	0			
Indeno(1,2,3-cd)pyrene	1046	40	1265	0	82.7	40-140	0			
Naphthalene	1229	40	1265	0	97.2	40-140	0			
Pyrene	1164	40	1265	0	92	40-140	0			
Surr: 2-Fluorobiphenyl	3173	0	3163	0	100	20-140	0			
Surr: 4-Terphenyl-d14	3356	0	3163	0	106	22-172	0			
Surr: Nitrobenzene-d5	3124	0	3163	0	98.8	8-140	0			

MSD				Sample ID: 1708468-08C MSD			Units: µg/Kg		Analysis Date: 8/11/2017 07:04 PM	
Client ID:				Run ID: SVMS6_170811A			SeqNo: 4580271		Prep Date: 8/11/2017	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1127	41	1302	0	86.6	40-140	1048	7.31	30	
Anthracene	1324	41	1302	0	102	40-140	1239	6.69	30	
Benzo(a)anthracene	1209	41	1302	0	92.8	40-140	1144	5.5	30	
Benzo(a)pyrene	1321	41	1302	0	101	40-140	1245	5.98	30	
Benzo(b)fluoranthene	1245	41	1302	0	95.6	40-140	1215	2.43	30	
Benzo(k)fluoranthene	1377	41	1302	0	106	40-140	1238	10.7	30	
Chrysene	1197	41	1302	0	91.9	40-140	1117	6.93	30	
Dibenzo(a,h)anthracene	788.1	41	1302	0	60.5	40-140	731.6	7.43	30	
Fluoranthene	1330	41	1302	0	102	40-140	1233	7.53	30	
Fluorene	1328	41	1302	0	102	40-140	1274	4.15	30	
Indeno(1,2,3-cd)pyrene	1089	41	1302	0	83.7	40-140	1046	4.05	30	
Naphthalene	1316	41	1302	0	101	40-140	1229	6.81	30	
Pyrene	1238	41	1302	0	95.1	40-140	1164	6.2	30	
Surr: 2-Fluorobiphenyl	3361	0	3256	0	103	20-140	3173	5.76	0	
Surr: 4-Terphenyl-d14	3496	0	3256	0	107	22-172	3356	4.08	0	
Surr: Nitrobenzene-d5	3265	0	3256	0	100	8-140	3124	4.41	0	

The following samples were analyzed in this batch:

1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105766** Instrument ID **VMS9** Method: **SW8260B**

Sample ID: MBLK-105766-105766				Units: µg/Kg-dry			Analysis Date: 8/15/2017 01:55 PM			
Client ID:		Run ID: VMS9_170815A			SeqNo: 4585821		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1013</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>1056</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>106</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>912.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>91.2</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>947.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>94.8</i>	<i>70-130</i>	<i>0</i>			

LCS				Sample ID: LCS-105766-105766			Units: µg/Kg-dry		Analysis Date: 8/15/2017 12:48 PM		
Client ID:			Run ID: VMS9_170815A			SeqNo: 4585820		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	964.5	30	1000	0	96.4	75-125	0				
Ethylbenzene	997.5	30	1000	0	99.8	75-125	0				
m,p-Xylene	1992	60	2000	0	99.6	80-125	0				
o-Xylene	973	30	1000	0	97.3	75-125	0				
Toluene	937.5	30	1000	0	93.8	70-125	0				
Xylenes, Total	2965	90	3000	0	98.8	75-125	0				
Surr: 1,2-Dichloroethane-d4	1024	0	1000	0	102	70-130	0				
Surr: 4-Bromofluorobenzene	1044	0	1000	0	104	70-130	0				
Surr: Dibromofluoromethane	1080	0	1000	0	108	70-130	0				
Surr: Toluene-d8	975.5	0	1000	0	97.6	70-130	0				

MS				Sample ID: 1708620-10A MS			Units: µg/Kg-dry		Analysis Date: 8/15/2017 08:57 PM		
Client ID:			Run ID: VMS9_170815A			SeqNo: 4585824		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	971.5	30	1000	0	97.2	75-125	0				
Ethylbenzene	988.5	30	1000	0	98.8	75-125	0				
m,p-Xylene	1998	60	2000	0	99.9	80-125	0				
o-Xylene	1012	30	1000	0	101	75-125	0				
Toluene	918	30	1000	0	91.8	70-125	0				
Xylenes, Total	3010	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	1024	0	1000	0	102	70-130	0				
Surr: 4-Bromofluorobenzene	1074	0	1000	0	107	70-130	0				
Surr: Dibromofluoromethane	1017	0	1000	0	102	70-130	0				
Surr: Toluene-d8	960.5	0	1000	0	96	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105766** Instrument ID **VMS9** Method: **SW8260B**

MS				Sample ID: 1708620-10A MS				Units: µg/Kg-dry			Analysis Date: 8/15/2017 08:57 PM		
Client ID:				Run ID: VMS9_170815A				SeqNo: 4585856		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzene	971.5	30	1000	0	97.2	75-125	0						
Ethylbenzene	988.5	30	1000	0	98.8	75-125	0						
m,p-Xylene	1998	60	2000	0	99.9	80-125	0						
o-Xylene	1012	30	1000	0	101	75-125	0						
Toluene	918	30	1000	0	91.8	70-125	0						
Xylenes, Total	3010	90	3000	0	100	75-125	0						
Surr: 1,2-Dichloroethane-d4	1024	0	1000	0	102	70-130	0						
Surr: 4-Bromofluorobenzene	1074	0	1000	0	107	70-130	0						
Surr: Dibromofluoromethane	1017	0	1000	0	102	70-130	0						
Surr: Toluene-d8	960.5	0	1000	0	96	70-130	0						

MSD				Sample ID: 1708620-10A MSD				Units: µg/Kg-dry		Analysis Date: 8/15/2017 09:20 PM	
Client ID:			Run ID: VMS9_170815A			SeqNo: 4585825		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	978	30	1000	0	97.8	75-125	971.5	0.667	30		
Ethylbenzene	995.5	30	1000	0	99.6	75-125	988.5	0.706	30		
m,p-Xylene	2019	60	2000	0	101	80-125	1998	1.02	30		
o-Xylene	997.5	30	1000	0	99.8	75-125	1012	1.39	30		
Toluene	923.5	30	1000	0	92.4	70-125	918	0.597	30		
Xylenes, Total	3016	90	3000	0	101	75-125	3010	0.216	30		
Surr: 1,2-Dichloroethane-d4	1020	0	1000	0	102	70-130	1024	0.44	30		
Surr: 4-Bromofluorobenzene	1060	0	1000	0	106	70-130	1074	1.41	30		
Surr: Dibromofluoromethane	1009	0	1000	0	101	70-130	1017	0.79	30		
Surr: Toluene-d8	953	0	1000	0	95.3	70-130	960.5	0.784	30		

MSD				Sample ID: 1708620-10A MSD				Units: µg/Kg-dry		Analysis Date: 8/15/2017 09:20 PM	
Client ID:			Run ID: VMS9_170815A			SeqNo: 4585857		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	978	30	1000	0	97.8	75-125	971.5	0.667	30		
Ethylbenzene	995.5	30	1000	0	99.6	75-125	988.5	0.706	30		
m,p-Xylene	2019	60	2000	0	101	80-125	1998	1.02	30		
o-Xylene	997.5	30	1000	0	99.8	75-125	1012	1.39	30		
Toluene	923.5	30	1000	0	92.4	70-125	918	0.597	30		
Xylenes, Total	3016	90	3000	0	101	75-125	3010	0.216	30		
Surr: 1,2-Dichloroethane-d4	1020	0	1000	0	102	70-130	1024	0.44	30		
Surr: 4-Bromofluorobenzene	1060	0	1000	0	106	70-130	1074	1.41	30		
Surr: Dibromofluoromethane	1009	0	1000	0	101	70-130	1017	0.79	30		
Surr: Toluene-d8	953	0	1000	0	95.3	70-130	960.5	0.784	30		

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105766** Instrument ID **VMS9** Method: **SW8260B**

The following samples were analyzed in this batch:

1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105717** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1708638-01B DUP				Units: mmhos/cm @25°		Analysis Date: 8/15/2017 10:20 AM		
Client ID:		Run ID: WETCHEM_170815C				SeqNo: 4583089		Prep Date: 8/14/2017		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	35.4	0.050	0	0	0		35.7	0.844	50	

The following samples were analyzed in this batch:

1708642-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105763** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-105763-105763					Units: s.u.		Analysis Date: 8/11/2017 01:15 PM		
Client ID:		Run ID: WETCHEM_170811D					SeqNo: 4578586		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	4.02	0.10	4	0	100	90-110	0			
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DUP		Sample ID: 1708595-01A DUP				Units: s.u.		Analysis Date: 8/11/2017 01:15 PM		
Client ID:		Run ID: WETCHEM_170811D				SeqNo: 4578588		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.83	0.10	0	0	0	0-0	7.78	0.641	20	
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DUP		Sample ID: 1708653-01A DUP					Units: s.u.		Analysis Date: 8/11/2017 01:15 PM		
Client ID:			Run ID: WETCHEM_170811D			SeqNo: 4578595		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	6.38	0.10	0	0	0	0-0	6.38	0	20	H
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The following samples were analyzed in this batch:

1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105818** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-105818-105818				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170814C				SeqNo: 4580122		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS		Sample ID: LCS-105818-105818				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170814C				SeqNo: 4580123		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.68 1.0 5 0 93.6 80-120 0

MS		Sample ID: 1708642-01A MS				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: WETCHEM_170814C				SeqNo: 4580126		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.46 1.0 5 -0.08824 71 75-125 0 S

MS		Sample ID: 1708642-01A MSI				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: WETCHEM_170814C				SeqNo: 4580128		Prep Date: 8/11/2017		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2697 96 2831 -0.08824 95.3 75-125 0

MS		Sample ID: 1708648-01A MS				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170814C				SeqNo: 4580131		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.567 0.96 4.808 -0.08333 75.9 75-125 0

MS		Sample ID: 1708648-01A MSI				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170814C				SeqNo: 4580133		Prep Date: 8/11/2017		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3044 99 3345 -0.08333 91 75-125 0

MSD		Sample ID: 1708642-01A MSD				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID: 13E Pit Bottom - Sub-Liner		Run ID: WETCHEM_170814C				SeqNo: 4580127		Prep Date: 8/11/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.307 0.99 4.95 -0.08824 68.6 75-125 3.46 4.52 20 S

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **105818** Instrument ID **WETCHEM** Method: **SW7196A**

MSD		Sample ID: 1708648-01A MSD				Units: mg/Kg		Analysis Date: 8/14/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170814C			SeqNo: 4580132		Prep Date: 8/11/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	3.71	1.0	5	-0.08333	75.9	75-125	3.567	3.92	20	

The following samples were analyzed in this batch:

1708642-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1708642
Project: Laramie - Pond 13E and 13W Pit Solids Mgmt.

QC BATCH REPORT

Batch ID: **R217914** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R217914				Units: % of sample		Analysis Date: 8/15/2017 05:30 PM		
Client ID:		Run ID: MOIST_170815E				SeqNo: 4585472		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-R217914				Units: % of sample		Analysis Date: 8/15/2017 05:30 PM		
Client ID:		Run ID: MOIST_170815E				SeqNo: 4585471		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			

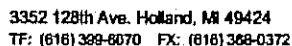
DUP		Sample ID: 1708597-06B DUP				Units: % of sample		Analysis Date: 8/15/2017 05:30 PM		
Client ID:		Run ID: MOIST_170815E				SeqNo: 4585456		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	17.75	0.050	0	0	0	0-0	17.65	0.565	5	

DUP		Sample ID: 1708641-01A DUP				Units: % of sample		Analysis Date: 8/15/2017 05:30 PM		
Client ID:		Run ID: MOIST_170815E				SeqNo: 4585468		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	30.56	0.050	0	0	0	0-0	30.51	0.164	5	

The following samples were analyzed in this batch:

1708642-01A




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



WORKORDER
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1708642

Form 2024b

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Jordan Carlo	8/3/2017	5:00pm
RECEIVED BY		M. Martine	8/9/17	1630
RELINQUISHED BY		Diane S. Shaw	8/10/17	0930
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 10-Aug-17 09:30

Work Order: 1708642

Received by: DS

Checklist completed by Diane Shaw 10-Aug-17
eSignature Date

Reviewed by: Chad Whelton 10-Aug-17
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 type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2/3.2 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>8/10/2017 3:40:35 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: