Terra Energy Partners Rulison Field Background Data	COGCC Table 915-1 Threshold (RSS Level)	Sample Locations																	
		RWF 13-23			RWF 531-13			RMV 84-34			RMV 85-35			RWF 32-26			RWF 13-4		
		3/12/2015			4/9/2014			7/24/2014			2/20/2014			3/16/2016			3/3/2021		
		Lab ID: 1503833			Lab ID: 1404514			Lab ID: 14071303			Lab ID: 1402946			Lab ID: 1603979			Lab ID: 21030614		
		BKGD 1	BKGD 2	BKGD 3	BKGD 1	BKGD 2	BKGD 3	BKGD 1	BKGD 2	BKGD 3	BKGD 1	BKGD 2	BKGD 3	BKGD 1	BKGD 2	BKGD 3	BKGD 1	BKGD 2	BKGD 3
ARSENIC	0.68	6.8	6.2	5.9	6.4	2.7	7.0	4.8	3.7	5.3	9.0	8.2	4.9	5.7	6.0	7.5	1.4	3.9	1.3
(average)		**6.3**			**5.37**			**4.6**			**7.37**			**6.40**			**2.20**		
ELECTRICAL CONDUCTIVITY (EC) (mmho/cm)	<4 mmhos/cm or x2 bkgd	-	-	1.0	-	-	0.49	-	-	0.5	-	-	0.87	2.5	-	-	-	-	0.14
pH	6 to 8.3	-	-	7.2	-	-	9.30	-	-	7.9	-	-	8.2	9.5	-	-	-	-	7.2
SODIUM ADSORPTION RATIO (SAR)	6	-	-	0.15	-	-	8.9	-	-	0.12	-	-	0.81	20	-	-	-	-	0.15

All restuls are reported in mg/kg, unless otherwise noted

Peak Arsenic Reading	**9.0**
Peak SAR	**20**
Peak EC	**2.5**
Peak pH	**9.5**

23-Mar-2015

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

Re: **WPX RWF 13-23 Halliburton Release 3.12.15** Work Order: **1503833**

Dear Mark,

ALS Environmental received 4 samples on 14-Mar-2015 10:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 28.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 23-Mar-15

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15
Work Order: **1503833**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1503833-01	CS 01	Soil		3/12/2015 11:23	3/14/2015 10:30	☐
1503833-02	BKGD 01	Soil		3/12/2015 11:30	3/14/2015 10:30	☐
1503833-03	BKGD 02	Soil		3/12/2015 11:33	3/14/2015 10:30	☐
1503833-04	BKGD 03	Soil		3/12/2015 11:37	3/14/2015 10:30	☐

ALS Group USA, Corp

Date: 23-Mar-15

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15
Work Order: 1503833

Case Narrative

Batch 68750, Method ICP_6010_S, Sample 1503833-02A MS/MSD: The MS and MSD recoveries were outside of the control limits for Barium and Zinc; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required.

Batch 68750, Method ICP_6010_S, Sample 1503833-02AMSD: The MSD recovery was outside of the control limit for Silver. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required.

ALS Group USA, Corp

Date: 23-Mar-15

Qualifier	Description
*	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
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
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

Units Reported	Description
% 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: *23-Mar-15*

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15 **Work Order:** 1503833
Sample ID: CS 01 **Lab ID:** 1503833-01
Collection Date: 3/12/2015 11:23 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/17/15	Analyst: **IT**
DRO (C10-C28)	**23**		**4.8**	**mg/Kg-dry**	1	3/18/2015 05:13 AM
Surr: 4-Terphenyl-d14	*53.3*		*39-133*	*%REC*	1	3/18/2015 05:13 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**			Analyst: **IT**
GRO (C6-C10)	ND		2.9	mg/Kg-dry	1	3/17/2015 12:29 PM
Surr: Toluene-d8	*111*		*50-150*	*%REC*	1	3/17/2015 12:29 PM
MERCURY BY CVAA			**SW7471B**		Prep: SW7471 / 3/18/15	Analyst: **LR**
Mercury	ND		0.015	mg/Kg-dry	1	3/18/2015 02:35 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/18/15	Analyst: **JEC**
Arsenic	**6.6**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Barium	**1,500**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Cadmium	ND		0.38	mg/Kg-dry	1	3/19/2015 08:55 PM
Chromium	**18**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Copper	**18**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Lead	**11**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Nickel	**24**		**0.48**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
Selenium	ND		0.48	mg/Kg-dry	1	3/20/2015 02:10 PM
Silver	ND		0.48	mg/Kg-dry	1	3/19/2015 08:55 PM
Zinc	**55**		**0.95**	**mg/Kg-dry**	1	3/19/2015 08:55 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 3/19/15	Analyst: **JEC**
Calcium	**60**		**5.0**	**mg/L**	10	3/19/2015 02:37 PM
Magnesium	**26**		**2.0**	**mg/L**	10	3/19/2015 02:37 PM
Sodium	**110**		**2.0**	**mg/L**	10	3/19/2015 02:37 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/19/15	Analyst: **JEC**
Sodium Adsorption Ratio	**3.1**		**0.010**	**none**	1	3/19/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 3/19/15	Analyst: **RM**
Acenaphthene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Acenaphthylene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Anthracene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Chrysene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM

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

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15 **Work Order:** 1503833
Sample ID: CS 01 **Lab ID:** 1503833-01
Collection Date: 3/12/2015 11:23 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Fluoranthene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Fluorene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Naphthalene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Pyrene	ND		7.7	µg/Kg-dry	1	3/20/2015 01:20 AM
Surr: 2-Fluorobiphenyl	*57.7*		*12-100*	*%REC*	1	3/20/2015 01:20 AM
Surr: 4-Terphenyl-d14	*85.9*		*25-137*	*%REC*	1	3/20/2015 01:20 AM
Surr: Nitrobenzene-d5	*62.7*		*37-107*	*%REC*	1	3/20/2015 01:20 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/16/15	Analyst: **BG**
Benzene	ND		35	µg/Kg-dry	1	3/17/2015 11:16 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	3/17/2015 11:16 PM
m,p-Xylene	ND		70	µg/Kg-dry	1	3/17/2015 11:16 PM
o-Xylene	ND		35	µg/Kg-dry	1	3/17/2015 11:16 PM
Toluene	ND		35	µg/Kg-dry	1	3/17/2015 11:16 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	3/17/2015 11:16 PM
Surr: 1,2-Dichloroethane-d4	*103*		*70-130*	*%REC*	1	3/17/2015 11:16 PM
Surr: 4-Bromofluorobenzene	*95.4*		*70-130*	*%REC*	1	3/17/2015 11:16 PM
Surr: Dibromofluoromethane	*97.8*		*70-130*	*%REC*	1	3/17/2015 11:16 PM
Surr: Toluene-d8	*101*		*70-130*	*%REC*	1	3/17/2015 11:16 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/19/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**1.1**		**0.050**	**mmhos/cm @2**	10	3/19/2015 04:00 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**18**		**0.58**	**mg/Kg-dry**	1	3/23/2015 10:00 AM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/19/15	Analyst: **MB**
Chromium, Hexavalent	ND		1.1	mg/Kg-dry	1	3/20/2015 04:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**14**		**0.050**	**% of sample**	1	3/17/2015 05:15 PM
PH			**SW9045D**		Prep: EXTRACT / 3/18/15	Analyst: **JRF**
pH	**8.7**			**s.u.**	1	3/18/2015 04:00 PM

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

ALS Group USA, Corp

Date: *23-Mar-15*

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15 **Work Order:** 1503833
Sample ID: BKGD 01 **Lab ID:** 1503833-02
Collection Date: 3/12/2015 11:30 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/18/15	Analyst: **JEC**
Arsenic	**6.8**		**0.38**	**mg/Kg-dry**	1	3/19/2015 09:17 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**15**		**0.050**	**% of sample**	1	3/17/2015 05:15 PM

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

ALS Group USA, Corp

Date: *23-Mar-15*

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15 **Work Order:** 1503833
Sample ID: BKGD 02 **Lab ID:** 1503833-03
Collection Date: 3/12/2015 11:33 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/18/15	Analyst: **JEC**
Arsenic	**6.2**		**0.47**	**mg/Kg-dry**	1	3/19/2015 09:39 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**26**		**0.050**	**% of sample**	1	3/17/2015 05:15 PM

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

ALS Group USA, Corp

Date: *23-Mar-15*

Client: HRL Compliance Solutions, Inc
Project: WPX RWF 13-23 Halliburton Release 3.12.15 **Work Order:** 1503833
Sample ID: BKGD 03 **Lab ID:** 1503833-04
Collection Date: 3/12/2015 11:37 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/18/15	Analyst: **JEC**
Arsenic	**5.9**		**0.42**	**mg/Kg-dry**	1	3/19/2015 09:45 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 3/19/15	Analyst: **JEC**
Calcium	**130**		**5.0**	**mg/L**	10	3/19/2015 02:43 PM
Magnesium	**33**		**2.0**	**mg/L**	10	3/19/2015 02:43 PM
Sodium	**7.4**		**2.0**	**mg/L**	10	3/19/2015 02:43 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/19/15	Analyst: **JEC**
Sodium Adsorption Ratio	**0.15**		**0.010**	**none**	1	3/19/2015
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/19/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**1.0**		**0.050**	**mmhos/cm @2**	10	3/19/2015 04:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**13**		**0.050**	**% of sample**	1	3/17/2015 05:15 PM
PH			**SW9045D**		Prep: EXTRACT / 3/17/15	Analyst: **JRF**
pH	**7.2**			**s.u.**	1	3/17/2015 04:00 PM

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

QC BATCH REPORT

Batch ID: **68695** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-68695-68695** Units: **mg/Kg** Analysis Date: **3/17/2015 05:16 PM**

Client ID: Run ID: **GC8_150317A** SeqNo: **3182895** Prep Date: **3/17/2015** 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	*1.328*	0	*2*	0	*66.4*	*39-133*	0			

LCS Sample ID: **DLCSS1-68695-68695** Units: **mg/Kg** Analysis Date: **3/17/2015 05:46 PM**

Client ID: Run ID: **GC8_150317A** SeqNo: **3182896** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	164.7	5.0	200	0	82.3	61-109	0			
Surr: 4-Terphenyl-d14	*1.122*	0	*2*	0	*56.1*	*39-133*	0			

MS Sample ID: **1503762-06B MS** Units: **mg/Kg** Analysis Date: **3/17/2015 06:46 PM**

Client ID: Run ID: **GC8_150317A** SeqNo: **3182897** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	298.3	8.1	325.7	45.17	77.7	48-110	0			
Surr: 4-Terphenyl-d14	*2.013*	0	*3.257*	0	*61.8*	*39-133*	0			

MSD Sample ID: **1503762-06B MSD** Units: **mg/Kg** Analysis Date: **3/17/2015 07:16 PM**

Client ID: Run ID: **GC8_150317A** SeqNo: **3182898** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	291.2	7.9	318	45.17	77.4	48-110	298.3	2.39	30	
Surr: 4-Terphenyl-d14	*1.921*	0	*3.18*	0	*60.4*	*39-133*	2.013	*4.7*	*30*	

The following samples were analyzed in this batch: 1503833-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68657a** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-68657-68657a** Units: **µg/Kg** Analysis Date: **3/16/2015 07:29 PM**
Client ID: Run ID: **GC9_150316A** SeqNo: **3180048** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*4918*	0	*5000*	0	*98.4*	*50-150*	0			

LCS Sample ID: **LCS-68657-68657a** Units: **µg/Kg** Analysis Date: **3/16/2015 06:38 PM**
Client ID: Run ID: **GC9_150316A** SeqNo: **3180047** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	448300	2,500	500000	0	89.7	70-130	0			
Surr: Toluene-d8	*4550*	0	*5000*	0	*91*	*50-150*	0			

MS Sample ID: **1503832-01A MS** Units: **µg/Kg** Analysis Date: **3/17/2015 01:47 AM**
Client ID: Run ID: **GC9_150316A** SeqNo: **3180052** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	423400	2,500	500000	0	84.7	70-130	0			
Surr: Toluene-d8	*4873*	0	*5000*	0	*97.5*	*50-150*	0			

MSD Sample ID: **1503832-01A MSD** Units: **µg/Kg** Analysis Date: **3/17/2015 02:12 AM**
Client ID: Run ID: **GC9_150316A** SeqNo: **3180054** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	424600	2,500	500000	0	84.9	70-130	423400	0.292	30	
Surr: Toluene-d8	*4404*	0	*5000*	0	*88.1*	*50-150*	4873	*10.1*	*30*	

The following samples were analyzed in this batch: 1503833-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68754** Instrument ID **HG1** Method: **SW7471B**

MBLK Sample ID: **MBLK-68754-68754** Units: **mg/Kg** Analysis Date: **3/18/2015 02:17 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184183** Prep Date: **3/18/2015** 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-68754-68754** Units: **mg/Kg** Analysis Date: **3/18/2015 02:19 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184185** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1758	0.020	0.1665	0	106	80-120	0			

MS Sample ID: **1503768-02CMS** Units: **mg/Kg** Analysis Date: **3/18/2015 02:26 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184191** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1295	0.012	0.1038	0.0193	106	75-125	0			

MSD Sample ID: **1503768-02CMSD** Units: **mg/Kg** Analysis Date: **3/18/2015 02:28 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184192** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.132	0.013	0.1052	0.0193	107	75-125	0.1295	1.94	35	

The following samples were analyzed in this batch: 1503833-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68750** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-68750-68750** Units: **mg/L** Analysis Date: **3/19/2015 06:59 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3186398** Prep Date: **3/18/2015** 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	ND	0.50								
Chromium	0.01504	0.25								J
Copper	0.02986	0.50								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.1387	0.50								J

LCS Sample ID: **LCS-68750-68750** Units: **mg/L** Analysis Date: **3/19/2015 07:05 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3186399** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.87	0.25	5	0	97.4	80-120	0			
Barium	4.734	0.25	5	0	94.7	80-120	0			
Cadmium	4.706	0.50	5	0	94.1	80-120	0			
Chromium	5.146	0.25	5	0	103	80-120	0			
Copper	5.292	0.50	5	0	106	80-120	0			
Lead	5.059	0.25	5	0	101	80-120	0			
Nickel	5.019	0.25	5	0	100	80-120	0			
Selenium	4.777	0.50	5	0	95.5	80-120	0			
Silver	5.399	0.25	5	0	108	80-120	0			
Zinc	5.186	0.50	5	0	104	80-120	0			

MS Sample ID: **1503833-02AMS** Units: **mg/Kg** Analysis Date: **3/19/2015 09:23 PM**
Client ID: **BKGD 01** Run ID: **ICP2_150319A** SeqNo: **3186446** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.61	0.32	6.427	5.792	106	75-125	0			
Barium	160.6	0.32	6.427	156.1	68.9	75-125	0			SO
Cadmium	6.333	0.64	6.427	0.02144	98.2	75-125	0			
Chromium	22.06	0.32	6.427	15.47	103	75-125	0			
Copper	22.16	0.64	6.427	15.95	96.6	75-125	0			
Lead	17.91	0.32	6.427	12.02	91.6	75-125	0			
Nickel	20.55	0.32	6.427	15.08	85.2	75-125	0			
Selenium	5.871	0.64	6.427	-0.6706	102	75-125	0			
Silver	7.751	0.32	6.427	-0.1355	123	75-125	0			
Zinc	60.92	0.64	6.427	51.94	140	75-125	0			SO

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68750** Instrument ID **ICP2** Method: **SW846 6010C**

MS Sample ID: **1503833-02AMS** Units: **mg/Kg** Analysis Date: **3/20/2015 03:26 PM**
Client ID: **BKGD 01** Run ID: **ICP2_150320A** SeqNo: **3187980** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	5.837	0.64	6.427	-0.5849	99.9	75-125	0			

MSD Sample ID: **1503833-02AMSD** Units: **mg/Kg** Analysis Date: **3/19/2015 09:28 PM**
Client ID: **BKGD 01** Run ID: **ICP2_150319A** SeqNo: **3186447** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.86	0.32	6.402	5.792	110	75-125	12.61	1.97	20	
Barium	165.6	0.32	6.402	156.1	147	75-125	160.6	3.07	20	SO
Cadmium	6.272	0.64	6.402	0.02144	97.6	75-125	6.333	0.964	20	
Chromium	22.94	0.32	6.402	15.47	117	75-125	22.06	3.9	20	
Copper	22.45	0.64	6.402	15.95	102	75-125	22.16	1.32	20	
Lead	17.72	0.32	6.402	12.02	89.1	75-125	17.91	1.03	20	
Nickel	20.95	0.32	6.402	15.08	91.6	75-125	20.55	1.89	20	
Selenium	5.797	0.64	6.402	-0.6706	101	75-125	5.871	1.28	20	
Silver	7.909	0.32	6.402	-0.1355	126	75-125	7.751	2.02	20	S
Zinc	61.66	0.64	6.402	51.94	152	75-125	60.92	1.2	20	SO

MSD Sample ID: **1503833-02AMSD** Units: **mg/Kg** Analysis Date: **3/20/2015 03:31 PM**
Client ID: **BKGD 01** Run ID: **ICP2_150320A** SeqNo: **3187981** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	5.961	0.64	6.402	-0.5849	102	75-125	5.837	2.1	20	

The following samples were analyzed in this batch: 1503833-01B 1503833-02A 1503833-03A 1503833-04A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68773** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1503898-01ADUP** Units: **mg/L** Analysis Date: **3/19/2015 03:11 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185811** Prep Date: **3/19/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	424.8	5.0	0	0	0	0-0	439.5	3.42		
Magnesium	139.3	2.0	0	0	0	0-0	144.9	3.92		
Sodium	2083	2.0	0	0	0	0-0	2152	3.23		

DUP Sample ID: **1503898-01ADUP** Units: **none** Analysis Date: **3/19/2015**
Client ID: Run ID: **SAR_150319A** SeqNo: **3185887** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	22.42	0.010	0	0	0		22.75	1.44	50	

The following samples were analyzed in this batch: 1503833-01C 1503833-04B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68802** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-68802-68802** Units: **µg/Kg** Analysis Date: **3/19/2015 04:45 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187574** Prep Date: **3/19/2015** DF: **1**

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								
Surr: 2-Fluorobiphenyl	*1320*	0	*1667*	0	*79.2*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1680*	0	*1667*	0	*101*	*25-137*	0			
Surr: Nitrobenzene-d5	*1463*	0	*1667*	0	*87.8*	*37-107*	0			

LCS Sample ID: **SLCSS1-68802-68802** Units: **µg/Kg** Analysis Date: **3/19/2015 05:05 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187575** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	524	6.7	666.7	0	78.6	45-110	0			
Acenaphthylene	573.7	6.7	666.7	0	86	45-105	0			
Anthracene	612.3	6.7	666.7	0	91.8	55-105	0			
Benzo(a)anthracene	624.7	6.7	666.7	0	93.7	50-110	0			
Benzo(a)pyrene	647.7	6.7	666.7	0	97.1	50-110	0			
Benzo(b)fluoranthene	650.3	6.7	666.7	0	97.5	45-115	0			
Benzo(g,h,i)perylene	616.7	6.7	666.7	0	92.5	40-125	0			
Benzo(k)fluoranthene	660.7	6.7	666.7	0	99.1	45-115	0			
Chrysene	617.7	6.7	666.7	0	92.6	55-110	0			
Dibenzo(a,h)anthracene	622.7	6.7	666.7	0	93.4	40-125	0			
Fluoranthene	624.3	6.7	666.7	0	93.6	55-115	0			
Fluorene	538.3	6.7	666.7	0	80.7	50-110	0			
Indeno(1,2,3-cd)pyrene	640.3	6.7	666.7	0	96	40-120	0			
Naphthalene	517.3	6.7	666.7	0	77.6	40-105	0			
Pyrene	649.7	6.7	666.7	0	97.4	45-125	0			
Surr: 2-Fluorobiphenyl	*1299*	0	*1667*	0	*77.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1629*	0	*1667*	0	*97.7*	*25-137*	0			
Surr: Nitrobenzene-d5	*1510*	0	*1667*	0	*90.6*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68802** Instrument ID **SVMS8** Method: **SW846 8270D**

MS Sample ID: **1503770-21A MS** Units: **µg/Kg** Analysis Date: **3/19/2015 06:37 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187578** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1071	13	1301	0	82.3	45-110	0			
Acenaphthylene	1162	13	1301	4.215	88.9	45-105	0			
Anthracene	1205	13	1301	7.458	92	55-105	0			
Benzo(a)anthracene	1217	13	1301	30.81	91.2	50-110	0			
Benzo(a)pyrene	1309	13	1301	43.45	97.3	50-110	0			
Benzo(b)fluoranthene	1377	13	1301	52.86	102	45-115	0			
Benzo(g,h,i)perylene	1356	13	1301	49.29	100	40-125	0			
Benzo(k)fluoranthene	1252	13	1301	17.19	94.9	45-115	0			
Chrysene	1197	13	1301	29.83	89.7	55-110	0			
Dibenzo(a,h)anthracene	1350	13	1301	9.404	103	40-125	0			
Fluoranthene	1245	13	1301	53.83	91.6	55-115	0			
Fluorene	1088	13	1301	0	83.6	50-110	0			
Indeno(1,2,3-cd)pyrene	1387	13	1301	41.83	103	40-120	0			
Naphthalene	1086	13	1301	6.81	82.9	40-105	0			
Pyrene	1362	13	1301	55.77	100	45-125	0			
Surr: 2-Fluorobiphenyl	*2664*	0	*3254*	0	*81.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3204*	0	*3254*	0	*98.5*	*25-137*	0			
Surr: Nitrobenzene-d5	*3104*	0	*3254*	0	*95.4*	*37-107*	0			

MSD Sample ID: **1503770-21A MSD** Units: **µg/Kg** Analysis Date: **3/19/2015 06:57 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187579** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1023	13	1327	0	77.1	45-110	1071	4.54	30	
Acenaphthylene	1165	13	1327	4.215	87.5	45-105	1162	0.28	30	
Anthracene	1226	13	1327	7.458	91.8	55-105	1205	1.7	30	
Benzo(a)anthracene	1292	13	1327	30.81	95.1	50-110	1217	5.95	30	
Benzo(a)pyrene	1367	13	1327	43.45	99.8	50-110	1309	4.32	30	
Benzo(b)fluoranthene	1382	13	1327	52.86	100	45-115	1377	0.394	30	
Benzo(g,h,i)perylene	1414	13	1327	49.29	103	40-125	1356	4.19	30	
Benzo(k)fluoranthene	1334	13	1327	17.19	99.2	45-115	1252	6.34	30	
Chrysene	1263	13	1327	29.83	92.9	55-110	1197	5.39	30	
Dibenzo(a,h)anthracene	1390	13	1327	9.404	104	40-125	1350	2.93	30	
Fluoranthene	1269	13	1327	53.83	91.6	55-115	1245	1.87	30	
Fluorene	1109	13	1327	0	83.6	50-110	1088	1.92	30	
Indeno(1,2,3-cd)pyrene	1475	13	1327	41.83	108	40-120	1387	6.14	30	
Naphthalene	1010	13	1327	6.81	75.6	40-105	1086	7.3	30	
Pyrene	1441	13	1327	55.77	104	45-125	1362	5.62	30	
Surr: 2-Fluorobiphenyl	*2550*	0	*3317*	0	*76.9*	*12-100*	2664	*4.36*	*40*	
Surr: 4-Terphenyl-d14	*3439*	0	*3317*	0	*104*	*25-137*	3204	*7.06*	*40*	
Surr: Nitrobenzene-d5	*2988*	0	*3317*	0	*90.1*	*37-107*	3104	*3.82*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68802** Instrument ID **SVMS8** Method: **SW846 8270D**

The following samples were analyzed in this batch: 1503833-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68655** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-68655-68655** Units: **µg/Kg** Analysis Date: **3/16/2015 01:40 PM**
Client ID: Run ID: **VMS5_150316A** SeqNo: **3180326** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*1020*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*967.5*	0	*1000*	0	*96.8*	*70-130*	0			
Surr: Dibromofluoromethane	*1009*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1009*	0	*1000*	0	*101*	*70-130*	0			

LCS Sample ID: **LCS-68655-68655** Units: **µg/Kg** Analysis Date: **3/16/2015 12:22 PM**
Client ID: Run ID: **VMS5_150316A** SeqNo: **3180324** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1046	30	1000	0	105	75-125	0			
Ethylbenzene	1120	30	1000	0	112	75-125	0			
m,p-Xylene	2228	60	2000	0	111	80-125	0			
o-Xylene	1098	30	1000	0	110	75-125	0			
Toluene	1076	30	1000	0	108	70-125	0			
Xylenes, Total	3326	90	3000	0	111	75-125	0			
Surr: 1,2-Dichloroethane-d4	*980*	0	*1000*	0	*98*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*988.5*	0	*1000*	0	*98.8*	*70-130*	0			
Surr: Toluene-d8	*1015*	0	*1000*	0	*102*	*70-130*	0			

MS Sample ID: **1503834-16A MS** Units: **µg/Kg** Analysis Date: **3/18/2015 01:04 PM**
Client ID: Run ID: **VMS5_150317B** SeqNo: **3183256** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	955.5	30	1000	0	95.6	75-125	0			
Ethylbenzene	992.5	30	1000	0	99.2	75-125	0			
m,p-Xylene	2012	60	2000	0	101	80-125	0			
o-Xylene	978.5	30	1000	0	97.8	75-125	0			
Toluene	962.5	30	1000	0	96.2	70-125	0			
Xylenes, Total	2991	90	3000	0	99.7	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1004*	0	*1000*	0	*100*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*993*	0	*1000*	0	*99.3*	*70-130*	0			
Surr: Dibromofluoromethane	*989*	0	*1000*	0	*98.9*	*70-130*	0			
Surr: Toluene-d8	*993*	0	*1000*	0	*99.3*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68655** Instrument ID **VMS5** Method: **SW8260B**

MSD Sample ID: **1503834-16A MSD** Units: **µg/Kg** Analysis Date: **3/18/2015 01:29 PM**
Client ID: Run ID: **VMS5_150317B** SeqNo: **3183257** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	966	30	1000	0	96.6	75-125	955.5	1.09	30	
Ethylbenzene	1033	30	1000	0	103	75-125	992.5	4	30	
m,p-Xylene	2076	60	2000	0	104	80-125	2012	3.08	30	
o-Xylene	1013	30	1000	0	101	75-125	978.5	3.46	30	
Toluene	954.5	30	1000	0	95.4	70-125	962.5	0.835	30	
Xylenes, Total	3088	90	3000	0	103	75-125	2991	3.21	30	
Surr: 1,2-Dichloroethane-d4	*997.5*	0	*1000*	0	*99.8*	*70-130*	1004	*0.699*	*30*	
Surr: 4-Bromofluorobenzene	*1006*	0	*1000*	0	*101*	*70-130*	993	*1.3*	*30*	
Surr: Dibromofluoromethane	*989.5*	0	*1000*	0	*99*	*70-130*	989	*0.0505*	*30*	
Surr: Toluene-d8	*1006*	0	*1000*	0	*101*	*70-130*	993	*1.25*	*30*	

The following samples were analyzed in this batch: 1503833-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68717** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-68717-68717** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150317M** SeqNo: **3181743** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.95	0	4	0	98.8	90-110	0			

DUP Sample ID: **1503833-04A DUP** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: **BKGD 03** Run ID: **WETCHEM_150317M** SeqNo: **3181754** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7	0	0	0	0	0-0	7.15	2.12	20	

DUP Sample ID: **1503886-05B DUP** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150317M** SeqNo: **3181763** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.87	0	0	0	0	0-0	7.88	0.127	20	H

The following samples were analyzed in this batch: 1503833-04A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68766** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-68766-68766** Units: **s.u.** Analysis Date: **3/18/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150318P** SeqNo: **3183892** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.96	0	4	0	99	90-110	0			

DUP Sample ID: **1503947-01A DUP** Units: **s.u.** Analysis Date: **3/18/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150318P** SeqNo: **3183899** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.1	0	0	0	0	0-0	7.88	2.75	20	

The following samples were analyzed in this batch: 1503833-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68773** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **1503898-01A DUP** Units: **mmhos/cm @25°** Analysis Date: **3/19/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150319O** SeqNo: **3185933** Prep Date: **3/19/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	15.09	0.050	0	0	0		15.62	3.45	50	

The following samples were analyzed in this batch: 1503833-01C 1503833-04B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **68890** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-68890-68890** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188483** Prep Date: **3/19/2015** 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-68890-68890** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188482** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	5.04	1.0	5	0	101	80-120	0			

MS Sample ID: **1503832-01B MS** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188468** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.346	0.93	4.673	0.1101	90.6	75-125	0			

MS Sample ID: **1503832-01B MSI** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188470** Prep Date: **3/19/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2963	93	3203	0.1101	92.5	75-125	0			

MSD Sample ID: **1503832-01B MSD** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188469** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.109	0.91	4.545	0.1101	88	75-125	4.346	5.6	20	

The following samples were analyzed in this batch: 1503833-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1503833
Project: WPX RWF 13-23 Halliburton Release 3.12.15

QC BATCH REPORT

Batch ID: **R159371** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R159371** Units: **% of sample** Analysis Date: **3/17/2015 05:15 PM**
Client ID: Run ID: **MOIST_150317B** SeqNo: **3182824** 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-R159371** Units: **% of sample** Analysis Date: **3/17/2015 05:15 PM**
Client ID: Run ID: **MOIST_150317B** SeqNo: **3182822** 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: **1503760-01A DUP** Units: **% of sample** Analysis Date: **3/17/2015 05:15 PM**
Client ID: Run ID: **MOIST_150317B** SeqNo: **3182788** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.44	0.050	0	0	0		6.4	15	20	

DUP Sample ID: **1503832-01B DUP** Units: **% of sample** Analysis Date: **3/17/2015 05:15 PM**
Client ID: Run ID: **MOIST_150317B** SeqNo: **3182804** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.89	0.050	0	0	0		20.2	12.5	20	

The following samples were analyzed in this batch: 1503833-01B 1503833-02A 1503833-03A 1503833-04A

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

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

ALS Environmental

Chain of Custody Form

Page ____ of ____

COC ID: 13070

ALS Project Manager: | ALS Work Order #: 1503833

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	WPX RWF 13-23 HALLIBURTON RELEASE	A	DRO
Work Order		Project Number		B	GRO
Company Name	HRL COMPLIANCE SOLUTIONS	Bill To Company	HRL	C	BTEX
Send Report To	MARK MUMBY	Invoice Attn		D	METALS - 910.1 (ARSENIC ONLY FOR # 2, 3, 4)
Address	2385 F 1/2 RD	Address		E	PAH
				F	SAR, EC, pH
City/State/Zip	GRAND JCT. CO 81505	City/State/Zip		G	
Phone	970-243-3271	Phone		H	
Fax		Fax		I	
e-Mail Address	mmumby@hrlcomp.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CS 01	3-12-15	1123	SOIL	8	3	X	X	X	X	X	X					
2	BKGD 01	"	1130	"	"	1				X							
3	BKGD 02	"	1133	"	"	1				X							
4	BKGD 03	"	1137	"	"	2				X		X					
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: CASEY RICHARDSON

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Other ____ ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 3-12-15	Time:	Received by:		Notes:
Relinquished by:	Date: 3-12-15	Time: 1500	Received by (Laboratory):	3/14/15 1030	
Logged by (Laboratory): DFS	Date: 3/16/15	Time: 0900	Checked by (Laboratory): TBB		

Cooler ID	Cooler Temp
	4.2°C

QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other ____
☐ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

From: (616) 298-1033
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J15121502230Suv

Ship Date: 12MAR15
ActWgt: 58.0 LB
CAD: 2264840/INET3010

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 031215-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

3 of 3

MPS# 7731 1711 8030

8263

Mstr# 7731 1711 7836

0201

FRI - 13 MAR 10:30A
PRIORITY OVERNIGHT

XX HLMA

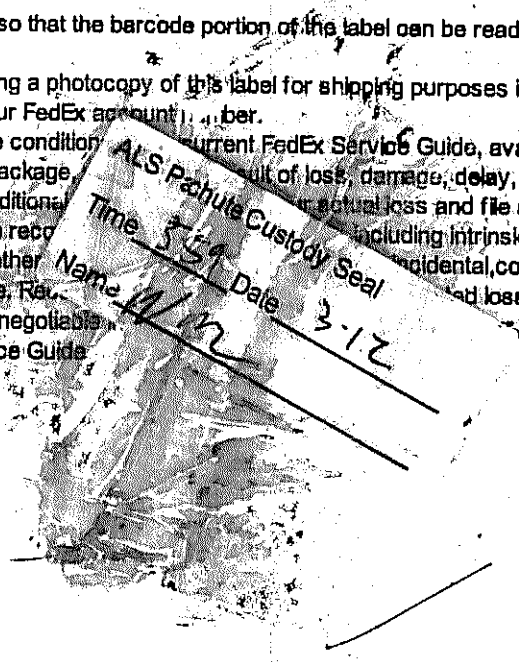
49424
MI-US
GRR

537J1/679AEE4B

After printing this label:

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

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



ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **14-Mar-15 10:30**

Work Order: **1503833** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 16-Mar-15 (Date) Reviewed by: Tom Bramish (eSignature) 16-Mar-15 (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):	4.2 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/16/2015 9:14:00 AM		
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:

16-Apr-2014

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

Re: **WPX 531-13 Backgrounds 4.9.14** Work Order: **1404514**

Dear Mark,

ALS Environmental received 3 samples on 10-Apr-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 14.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 16-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX 531-13 Backgrounds 4.9.14
Work Order: **1404514**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1404514-01	RWF 531-13-B-1	Soil		4/9/2014 14:20	4/10/2014 09:30	☐
1404514-02	RWF 531-13-B-2	Soil		4/9/2014 14:25	4/10/2014 09:30	☐
1404514-03	RWF 531-13-B-3	Soil		4/9/2014 14:30	4/10/2014 09:30	☐

Qualifier	Description
*	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

Acronym	Description
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

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

ALS Group USA, Corp

Date: *16-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX 531-13 Backgrounds 4.9.14 **Work Order:** 1404514
Sample ID: RWF 531-13-B-1 **Lab ID:** 1404514-01
Collection Date: 4/9/2014 02:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/12/14	Analyst: **RH**
Arsenic	**6.4**		**1.7**	**mg/Kg-dry**	5	4/14/2014 01:35 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**1.8**		**0.050**	**% of sample**	1	4/10/2014 11:00 AM

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

ALS Group USA, Corp

Date: *16-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX 531-13 Backgrounds 4.9.14 **Work Order:** 1404514
Sample ID: RWF 531-13-B-2 **Lab ID:** 1404514-02
Collection Date: 4/9/2014 02:25 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/12/14	Analyst: **RH**
Arsenic	**2.7**		**2.1**	**mg/Kg-dry**	5	4/14/2014 03:16 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**1.5**		**0.050**	**% of sample**	1	4/10/2014 11:00 AM

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

ALS Group USA, Corp

Date: *16-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX 531-13 Backgrounds 4.9.14 **Work Order:** 1404514
Sample ID: RWF 531-13-B-3 **Lab ID:** 1404514-03
Collection Date: 4/9/2014 02:30 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/12/14	Analyst: **RH**
Arsenic	**7.0**		**2.0**	**mg/Kg-dry**	5	4/14/2014 03:46 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 4/13/14	Analyst: **RH**
Calcium	ND		10	mg/L	20	4/13/2014 04:14 PM
Magnesium	ND		4.0	mg/L	20	4/13/2014 04:14 PM
Sodium	**97**		**4.0**	**mg/L**	20	4/13/2014 04:14 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 4/13/14	Analyst: **RH**
Sodium Adsorption Ratio	**8.9**		**0.010**	**none**	1	4/13/2014
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 4/13/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**0.49**		**0.050**	**mmhos/cm @25**	10	4/14/2014 11:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**8.4**		**0.050**	**% of sample**	1	4/10/2014 11:00 AM
PH			**SW9045D**		Prep: EXTRACT / 4/10/14	Analyst: **AT**
pH	**9.3**			**s.u.**	1	4/10/2014 08:30 AM

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

ALS Group USA, Corp

Date: 16-Apr-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1404514

Project: WPX 531-13 Backgrounds 4.9.14

Batch ID: **57402** Instrument ID **ICPMS2** Method: **SW6020A**

DUP Sample ID: **1404513-03BDUP** Units: **mg/L** Analysis Date: **4/13/2014 04:08 PM**

Client ID: Run ID: **ICPMS2_140413A** SeqNo: **2710354** Prep Date: **4/13/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	74.18	10	0	0	0	0-0	78.36	5.48		
Magnesium	2.034	4.0	0	0	0	0-0	2.164	0		J
Sodium	2.144	4.0	0	0	0	0-0	4.016	0		J

The following samples were analyzed in this batch: 1404514-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404514
Project: WPX 531-13 Backgrounds 4.9.14

QC BATCH REPORT

Batch ID: **57491** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-57491-57491** Units: **mg/Kg** Analysis Date: **4/13/2014 11:54 PM**
Client ID: Run ID: **ICPMS1_140412A** SeqNo: **2710651** Prep Date: **4/12/2014** 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-57491-57491** Units: **mg/Kg** Analysis Date: **4/14/2014**
Client ID: Run ID: **ICPMS1_140412A** SeqNo: **2710652** Prep Date: **4/12/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.544	0.25	5	0	90.9	80-120	0			

MS Sample ID: **1404528-05BMS** Units: **mg/Kg** Analysis Date: **4/14/2014 04:40 AM**
Client ID: Run ID: **ICPMS1_140412A** SeqNo: **2710719** Prep Date: **4/12/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.044	1.4	6.831	1.605	94.3	75-125	0			

MSD Sample ID: **1404528-05BMSD** Units: **mg/Kg** Analysis Date: **4/14/2014 04:46 AM**
Client ID: Run ID: **ICPMS1_140412A** SeqNo: **2710720** Prep Date: **4/12/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.138	1.4	6.775	1.605	96.4	75-125	8.044	1.17	25	

The following samples were analyzed in this batch: 1404514-01A 1404514-02A 1404514-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404514
Project: WPX 531-13 Backgrounds 4.9.14

QC BATCH REPORT

Batch ID: **57402** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1404513-03B DUP** Units: **mmhos/cm @25°C** Analysis Date: **4/14/2014 11:00 AM**

Client ID: Run ID: **WETCHEM_140414B** SeqNo: **2710883** Prep Date: **4/13/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.418	0.050	0	0	0		0.452	7.82	50	

The following samples were analyzed in this batch: 1404514-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404514
Project: WPX 531-13 Backgrounds 4.9.14

QC BATCH REPORT

Batch ID: **57431** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **WLCSS1-041014-57431** Units: **s.u.** Analysis Date: **4/10/2014 08:30 AM**
Client ID: Run ID: **WETCHEM_140410H** SeqNo: **2706863** Prep Date: **4/10/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.99	0	4	0	99.8	90-110	0			

DUP Sample ID: **1404485-01B DUP** Units: **s.u.** Analysis Date: **4/10/2014 08:30 AM**
Client ID: Run ID: **WETCHEM_140410H** SeqNo: **2706865** Prep Date: **4/10/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	12.1	0	0	0	0	0-0	12.15	0.412	20	

The following samples were analyzed in this batch: 1404514-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404514
Project: WPX 531-13 Backgrounds 4.9.14

QC BATCH REPORT

Batch ID: **R138764** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R138764** Units: **% of sample** Analysis Date: **4/10/2014 11:00 AM**
Client ID: Run ID: **MOIST_140410D** SeqNo: **2708390** 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-R138764** Units: **% of sample** Analysis Date: **4/10/2014 11:00 AM**
Client ID: Run ID: **MOIST_140410D** SeqNo: **2708389** 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: **1404485-01B DUP** Units: **% of sample** Analysis Date: **4/10/2014 11:00 AM**
Client ID: Run ID: **MOIST_140410D** SeqNo: **2708365** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.17	0.050	0	0	0	0-0	3.95	5.42	20	

DUP Sample ID: **1404509-01B DUP** Units: **% of sample** Analysis Date: **4/10/2014 11:00 AM**
Client ID: Run ID: **MOIST_140410D** SeqNo: **2708377** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.49	0.050	0	0	0	0-0	11.2	2.56	20	

The following samples were analyzed in this batch: 1404514-01A 1404514-02A 1404514-03A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #: 1404514

		SAMPLER	Reed Wold	DATE	4/9/14	PAGE	1 of 1
PROJECT NAME	WPX RWF 531-13-Backgrounds	SITE ID	RWF 531-13	TURNAROUND	Standard	DISPOSAL	(By Lab) or Return to Client
PROJECT No.		EDD FORMAT					
		PURCHASE ORDER					
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX				
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney				
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215				
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635				
PHONE	970-243-3271	PHONE	970-683-2295				
FAX	970-243-3280	FAX					
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com				

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic	SAR/EC/pH
1	RWF 531-13-B-1	So	4/9/14	2:20	1	8		X	
2	RWF 531-13-B-2	↓	↓	2:25	1	↓		X	
3	RWF 531-13-B-3	↓	↓	2:30	2	↓		X	X

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

For metals or anions, please detail analytes below.

Comments:

3.2°C

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	4/9/14	2:45
RECEIVED BY	N. Martinez	N. Martinez	4-9-14	2:45
RELINQUISHED BY	N. Martinez	N. MARtinez	4-9-14	2:45
RECEIVED BY	D. F. Shaw	Diane F. Shaw	4/10/14	0930
RELINQUISHED BY				
RECEIVED BY				

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

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **10-Apr-14 09:30**

Work Order: **1404514** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 10-Apr-14 (Date) Reviewed by: Ann Preston (eSignature) 10-Apr-14 (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):	3.2 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	4/10/2014 11:37:16 AM		
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:			

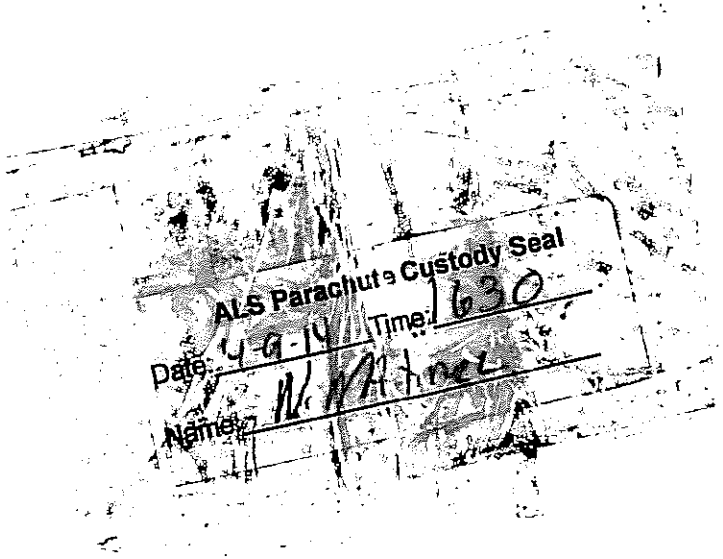
Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:


ALS Parachute Custody Seal
Date: 4-9-14
Time: 1630
Name:

01-Aug-2014

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

Re: **WPX RMV 84-34 Backgrounds 7.24.14** Work Order: **14071303**

Dear Mark,

ALS Environmental received 3 samples on 25-Jul-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 14.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 01-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX RMV 84-34 Backgrounds 7.24.14
Work Order: **14071303**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14071303-01	RMV 84-34-B-1	Soil		7/24/2014 12:10	7/25/2014 09:30	☐
14071303-02	RMV 84-34-B-2	Soil		7/24/2014 12:15	7/25/2014 09:30	☐
14071303-03	RMV 84-34-B-3	Soil		7/24/2014 12:20	7/25/2014 09:30	☐

Qualifier	Description
*	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

Acronym	Description
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

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

ALS Group USA, Corp

Date: *01-Aug-14*

Client: HRL Compliance Solutions, Inc
Project: WPX RMV 84-34 Backgrounds 7.24.14 **Work Order:** 14071303
Sample ID: RMV 84-34-B-1 **Lab ID:** 14071303-01
Collection Date: 7/24/2014 12:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 7/29/14	Analyst: **ML**
Arsenic	**4.8**		**1.5**	**mg/Kg-dry**	5	7/30/2014 03:03 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**0.99**		**0.050**	**% of sample**	1	7/25/2014 02:21 PM

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

ALS Group USA, Corp

Date: *01-Aug-14*

Client: HRL Compliance Solutions, Inc
Project: WPX RMV 84-34 Backgrounds 7.24.14 **Work Order:** 14071303
Sample ID: RMV 84-34-B-2 **Lab ID:** 14071303-02
Collection Date: 7/24/2014 12:15 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 7/29/14	Analyst: **ML**
Arsenic	**3.7**		**1.9**	**mg/Kg-dry**	5	7/30/2014 03:09 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**1.3**		**0.050**	**% of sample**	1	7/25/2014 02:21 PM

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

ALS Group USA, Corp

Date: *01-Aug-14*

Client: HRL Compliance Solutions, Inc
Project: WPX RMV 84-34 Backgrounds 7.24.14 **Work Order:** 14071303
Sample ID: RMV 84-34-B-3 **Lab ID:** 14071303-03
Collection Date: 7/24/2014 12:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 7/29/14	Analyst: **ML**
Arsenic	**5.3**		**1.9**	**mg/Kg-dry**	5	7/30/2014 03:15 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 7/29/14	Analyst: **RH**
Calcium	**89**		**10**	**mg/L**	20	7/29/2014 07:40 PM
Magnesium	**15**		**4.0**	**mg/L**	20	7/29/2014 07:40 PM
Sodium	**4.5**		**4.0**	**mg/L**	20	7/29/2014 07:40 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHOD**		Prep: USDA Method 20B / 7/29/14	Analyst: **RH**
Sodium Adsorption Ratio	**0.12**		**0.010**	**none**	1	7/29/2014
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHOD**		Prep: USDA Method 20B / 7/29/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**0.54**		**0.050**	**mmhos/cm @25**	10	7/30/2014 09:30 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**1.5**		**0.050**	**% of sample**	1	7/25/2014 02:21 PM
PH			**SW9045D**		Prep: EXTRACT / 7/25/14	Analyst: **AT**
pH	**7.9**			**s.u.**	1	7/25/2014 04:00 PM

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

ALS Group USA, Corp

Date: 01-Aug-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 14071303

Project: WPX RMV 84-34 Backgrounds 7.24.14

Batch ID: **61003** Instrument ID **ICPMS2** Method: **SW6020A**

DUP Sample ID: **14071304-05CDUP** Units: **mg/L** Analysis Date: **7/29/2014 08:35 PM**

Client ID: Run ID: **ICPMS2_140729A** SeqNo: **2868183** Prep Date: **7/29/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	85.86	10	0	0	0	0-0	78.9	8.45		
Magnesium	166.8	4.0	0	0	0	0-0	147.2	12.5		
Sodium	1717	4.0	0	0	0	0-0	1552	10.1		

DUP Sample ID: **14071304-05CDUP** Units: **none** Analysis Date: **7/29/2014**

Client ID: Run ID: **SAR_140729A** SeqNo: **2868591** Prep Date: **7/29/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	24.88	0.010	0	0	0		0			

The following samples were analyzed in this batch: 14071303-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071303
Project: WPX RMV 84-34 Backgrounds 7.24.14

QC BATCH REPORT

Batch ID: **61093** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-61093-61093** Units: **mg/Kg** Analysis Date: **7/29/2014 10:51 PM**
Client ID: Run ID: **ICPMS1_140729A** SeqNo: **2868338** Prep Date: **7/29/2014** 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-61093-61093** Units: **mg/Kg** Analysis Date: **7/29/2014 10:57 PM**
Client ID: Run ID: **ICPMS1_140729A** SeqNo: **2868339** Prep Date: **7/29/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.19	0.25	5	0	83.8	80-120	0			

MS Sample ID: **14071294-02AMS** Units: **mg/Kg** Analysis Date: **7/30/2014 02:33 AM**
Client ID: Run ID: **ICPMS1_140729A** SeqNo: **2868375** Prep Date: **7/29/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.2	1.5	7.257	9.081	112	75-125	0			

MSD Sample ID: **14071294-02AMSD** Units: **mg/Kg** Analysis Date: **7/30/2014 02:39 AM**
Client ID: Run ID: **ICPMS1_140729A** SeqNo: **2868376** Prep Date: **7/29/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.88	1.5	7.267	9.081	79.8	75-125	17.2	14.5	25	

The following samples were analyzed in this batch: 14071303-01A 14071303-02A 14071303-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071303
Project: WPX RMV 84-34 Backgrounds 7.24.14

QC BATCH REPORT

Batch ID: **61003** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **14071304-05C DUP** Units: **mmhos/cm @25°C** Analysis Date: **7/30/2014 09:30 AM**

Client ID: Run ID: **WETCHEM_140730A** SeqNo: **2868510** Prep Date: **7/29/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	10.4	0.050	0	0	0		10.72	3.03	50	

The following samples were analyzed in this batch: 14071303-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071303
Project: WPX RMV 84-34 Backgrounds 7.24.14

QC BATCH REPORT

Batch ID: **61005** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-61005-61005** Units: **s.u.** Analysis Date: **7/25/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_140725M** SeqNo: **2863385** Prep Date: **7/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4	0	4	0	100	90-110	0			

DUP Sample ID: **14071083-01A DUP** Units: **s.u.** Analysis Date: **7/25/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_140725M** SeqNo: **2863387** Prep Date: **7/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.21	0	0	0	0	0-0	8.18	0.366	20	

DUP Sample ID: **14071234-01A DUP** Units: **s.u.** Analysis Date: **7/25/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_140725M** SeqNo: **2863393** Prep Date: **7/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.86	0	0	0	0	0-0	6.94	1.16	20	

The following samples were analyzed in this batch: 14071303-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071303
Project: WPX RMV 84-34 Backgrounds 7.24.14

QC BATCH REPORT

Batch ID: **R145231** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R145231** Units: **% of sample** Analysis Date: **7/25/2014 02:21 PM**
Client ID: Run ID: **MOIST_140725B** SeqNo: **2865136** 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-R145231** Units: **% of sample** Analysis Date: **7/25/2014 02:21 PM**
Client ID: Run ID: **MOIST_140725B** SeqNo: **2865135** 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: **14071242-01A DUP** Units: **% of sample** Analysis Date: **7/25/2014 02:21 PM**
Client ID: Run ID: **MOIST_140725B** SeqNo: **2865114** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.34	0.050	0	0	0	0-0	4.98	6.98	20	

DUP Sample ID: **14071256-01A DUP** Units: **% of sample** Analysis Date: **7/25/2014 02:21 PM**
Client ID: Run ID: **MOIST_140725B** SeqNo: **2865120** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.37	0.050	0	0	0	0-0	7.56	2.55	20	

The following samples were analyzed in this batch: 14071303-01A 14071303-02A 14071303-03A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #	14071303				
SAMPLER	Reed Wold	DATE	7/24/14	PAGE	1 of 1
PROJECT NAME	WPX RMV 84-34	SITE ID	RMV 84-34	TURNAROUND	5 Day
DISPOSAL	(By Lab) or Return to Client				
PROJECT No.	Backgrounds	EDD FORMAT			
		PURCHASE ORDER			
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX		
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney		
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215		
CITY / STATE / ZIP	Grand Junction, CO 81505	CITY / STATE / ZIP	Parachute CO 81635		
PHONE	970-243-3271	PHONE	970-683-2295		
FAX	970-243-3280	FAX			
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic	SAR/EC/pH
1	RMV 84-34-B-1	So	7/24/14	12:10	1	8		X	
2	" " B-2	↓	↓	12:15	1	8		X	
3	" " B-3	↓	↓	12:20	2	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:

5.2°C

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	7/24/14	3:00
RECEIVED BY	N. M	N. Martinez	7-24-14	4:00
RELINQUISHED BY	N. M	N. Artinez	7-24-14	4:00
RECEIVED BY	[signature]	Keith Wifrenet	7/25/14	0930
RELINQUISHED BY				
RECEIVED BY				

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

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **25-Jul-14 09:30**

Work Order: **14071303** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 25-Jul-14 (Date) Reviewed by: Ann Preston (eSignature) 27-Jul-14 (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):	5.2 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	7/25/2014 11:08:35 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6070
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, MI 49424

Origin ID: GRRA

FedEx Express

J142014081903uv

Ship Date: 24JUL14
ActWgt: 75.0 LB
CAD: 2264840/INET3550

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 672414-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070 BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

FRI - 25 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7706 8523 6659

68 GRRA

49424
MI-US
GRR

522C2/ED4F/BAC9

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

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25-Feb-2014

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

Re: **WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14** Work Order: **1402946**

Dear Mark,

ALS Environmental received 8 samples on 21-Feb-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 34.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 25-Feb-14

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14
Work Order: **1402946**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1402946-01	Bottom	Soil		2/19/2014 09:00	2/21/2014 09:30	☐
1402946-02	East Wall	Soil		2/19/2014 09:10	2/21/2014 09:30	☐
1402946-03	South Wall	Soil		2/19/2014 10:00	2/21/2014 09:30	☐
1402946-04	West Wall	Soil		2/19/2014 09:20	2/21/2014 09:30	☐
1402946-05	North Wall	Soil		2/19/2014 09:25	2/21/2014 09:30	☐
1402946-06	RMV 85-34-B-1	Soil		2/20/2014 09:45	2/21/2014 09:30	☐
1402946-07	RMV 85-34-B-2	Soil		2/20/2014 09:50	2/21/2014 09:30	☐
1402946-08	RMV 85-34-B-3	Soil		2/20/2014 09:55	2/21/2014 09:30	☐

ALS Group USA, Corp

Date: 25-Feb-14

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14
Work Order: 1402946

Case Narrative

Batch 55985 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

ALS Group USA, Corp

Date: 25-Feb-14

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14
WorkOrder: **1402946**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% 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: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: Bottom **Lab ID:** 1402946-01
Collection Date: 2/19/2014 09:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/21/14	Analyst: **IT**
DRO (C10-C28)	ND		5.1	mg/Kg-dry	1	2/24/2014 04:07 PM
Surr: 4-Terphenyl-d14	*74.6*		*39-115*	*%REC*	1	2/24/2014 04:07 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 2/21/14	Analyst: **IT**
GRO (C6-C10)	ND		3.1	mg/Kg-dry	1	2/24/2014 04:26 PM
Surr: Toluene-d8	*115*		*50-150*	*%REC*	1	2/24/2014 04:26 PM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 2/24/14	Analyst: **LR**
Mercury	**0.033**		**0.017**	**mg/Kg-dry**	1	2/24/2014 03:55 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 2/21/14	Analyst: **RH**
Arsenic	**6.8**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Barium	**190**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Cadmium	ND		0.92	mg/Kg-dry	5	2/23/2014 06:40 AM
Chromium	**17**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Copper	**16**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Lead	**11**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Nickel	**28**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
Selenium	ND		2.3	mg/Kg-dry	5	2/23/2014 06:40 AM
Silver	ND		2.3	mg/Kg-dry	5	2/23/2014 06:40 AM
Zinc	**43**		**4.6**	**mg/Kg-dry**	5	2/23/2014 06:40 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	**35**		**10**	**mg/L**	20	2/25/2014 02:09 PM
Magnesium	**29**		**4.0**	**mg/L**	20	2/25/2014 02:09 PM
Sodium	**220**		**4.0**	**mg/L**	20	2/25/2014 02:09 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**6.6**		**0.010**	**none**	1	2/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 2/21/14	Analyst: **HL**
Acenaphthene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Acenaphthylene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Anthracene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Benzo(a)anthracene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Benzo(a)pyrene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Benzo(b)fluoranthene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Benzo(g,h,i)perylene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Benzo(k)fluoranthene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Chrysene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM

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

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: Bottom **Lab ID:** 1402946-01
Collection Date: 2/19/2014 09:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Fluoranthene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Fluorene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Indeno(1,2,3-cd)pyrene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Naphthalene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Pyrene	ND		8.2	µg/Kg-dry	1	2/24/2014 03:00 PM
Surr: 2-Fluorobiphenyl	*64.2*		*12-100*	*%REC*	1	2/24/2014 03:00 PM
Surr: 4-Terphenyl-d14	*82.0*		*25-137*	*%REC*	1	2/24/2014 03:00 PM
Surr: Nitrobenzene-d5	*75.9*		*37-107*	*%REC*	1	2/24/2014 03:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 2/21/14	Analyst: **RS**
Benzene	ND		37	µg/Kg-dry	1	2/24/2014 01:32 PM
Ethylbenzene	ND		37	µg/Kg-dry	1	2/24/2014 01:32 PM
m,p-Xylene	**160**		**75**	**µg/Kg-dry**	1	2/24/2014 01:32 PM
o-Xylene	ND		37	µg/Kg-dry	1	2/24/2014 01:32 PM
Toluene	ND		37	µg/Kg-dry	1	2/24/2014 01:32 PM
Xylenes, Total	**160**		**110**	**µg/Kg-dry**	1	2/24/2014 01:32 PM
Surr: 1,2-Dichloroethane-d4	*95.8*		*70-130*	*%REC*	1	2/24/2014 01:32 PM
Surr: 4-Bromofluorobenzene	*91.7*		*70-130*	*%REC*	1	2/24/2014 01:32 PM
Surr: Dibromofluoromethane	*100*		*70-130*	*%REC*	1	2/24/2014 01:32 PM
Surr: Toluene-d8	*98.2*		*70-130*	*%REC*	1	2/24/2014 01:32 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **MELB**
Electrical Conductivity @ Saturation	**1.6**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **EE**
Chromium, Trivalent	**17**		**0.62**	**mg/Kg-dry**	1	2/24/2014 04:30 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 2/24/14	Analyst: **EE**
Chromium, Hexavalent	ND		0.62	mg/Kg-dry	1	2/24/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**20**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**		Prep: EXTRACT / 2/22/14	Analyst: **AT**
pH	**8.5**			**s.u.**	1	2/22/2014 04:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: East Wall **Lab ID:** 1402946-02
Collection Date: 2/19/2014 09:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/21/14	Analyst: **IT**
DRO (C10-C28)	**9.5**		**4.6**	**mg/Kg-dry**	1	2/24/2014 04:37 PM
Surr: 4-Terphenyl-d14	*64.9*		*39-115*	*%REC*	1	2/24/2014 04:37 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 2/21/14	Analyst: **IT**
GRO (C6-C10)	**17**		**2.8**	**mg/Kg-dry**	1	2/24/2014 04:51 PM
Surr: Toluene-d8	*108*		*50-150*	*%REC*	1	2/24/2014 04:51 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	**32**		**10**	**mg/L**	20	2/25/2014 02:15 PM
Magnesium	**42**		**4.0**	**mg/L**	20	2/25/2014 02:15 PM
Sodium	**240**		**4.0**	**mg/L**	20	2/25/2014 02:15 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**6.5**		**0.010**	**none**	1	2/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 2/21/14	Analyst: **HL**
Acenaphthene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Chrysene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Fluorene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Naphthalene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 03:32 PM
Surr: 2-Fluorobiphenyl	*61.4*		*12-100*	*%REC*	1	2/24/2014 03:32 PM
Surr: 4-Terphenyl-d14	*75.6*		*25-137*	*%REC*	1	2/24/2014 03:32 PM
Surr: Nitrobenzene-d5	*70.5*		*37-107*	*%REC*	1	2/24/2014 03:32 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 2/21/14	Analyst: **BG**
Benzene	ND		34	µg/Kg-dry	1	2/22/2014 10:53 AM
Ethylbenzene	ND		34	µg/Kg-dry	1	2/22/2014 10:53 AM
m,p-Xylene	**230**		**68**	**µg/Kg-dry**	1	2/22/2014 10:53 AM
o-Xylene	**76**		**34**	**µg/Kg-dry**	1	2/22/2014 10:53 AM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: East Wall **Lab ID:** 1402946-02
Collection Date: 2/19/2014 09:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	**37**		**34**	**µg/Kg-dry**	1	2/22/2014 10:53 AM
Xylenes, Total	**300**		**100**	**µg/Kg-dry**	1	2/22/2014 10:53 AM
Surr: 1,2-Dichloroethane-d4	*96.6*		*70-130*	*%REC*	1	2/22/2014 10:53 AM
Surr: 4-Bromofluorobenzene	*94.4*		*70-130*	*%REC*	1	2/22/2014 10:53 AM
Surr: Dibromofluoromethane	*100*		*70-130*	*%REC*	1	2/22/2014 10:53 AM
Surr: Toluene-d8	*100*		*70-130*	*%REC*	1	2/22/2014 10:53 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**	Prep: USDA Method 20B / 2/25/14		Analyst: **MELB**
Electrical Conductivity @ Saturation	**1.8**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**11**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**	Prep: EXTRACT / 2/22/14		Analyst: **AT**
pH	**8.9**			**s.u.**	1	2/22/2014 04:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: South Wall **Lab ID:** 1402946-03
Collection Date: 2/19/2014 10:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/21/14	Analyst: **IT**
DRO (C10-C28)	**14**		**4.6**	**mg/Kg-dry**	1	2/24/2014 05:06 PM
Surr: 4-Terphenyl-d14	*66.2*		*39-115*	*%REC*	1	2/24/2014 05:06 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 2/21/14	Analyst: **IT**
GRO (C6-C10)	**17**		**2.8**	**mg/Kg-dry**	1	2/24/2014 05:17 PM
Surr: Toluene-d8	*109*		*50-150*	*%REC*	1	2/24/2014 05:17 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	**81**		**10**	**mg/L**	20	2/25/2014 02:20 PM
Magnesium	**47**		**4.0**	**mg/L**	20	2/25/2014 02:20 PM
Sodium	**42**		**4.0**	**mg/L**	20	2/25/2014 02:20 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**0.93**		**0.010**	**none**	1	2/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 2/21/14	Analyst: **HL**
Acenaphthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Chrysene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Fluorene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Naphthalene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:04 PM
Surr: 2-Fluorobiphenyl	*63.6*		*12-100*	*%REC*	1	2/24/2014 04:04 PM
Surr: 4-Terphenyl-d14	*79.5*		*25-137*	*%REC*	1	2/24/2014 04:04 PM
Surr: Nitrobenzene-d5	*72.0*		*37-107*	*%REC*	1	2/24/2014 04:04 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 2/21/14	Analyst: **RS**
Benzene	ND		34	µg/Kg-dry	1	2/24/2014 01:57 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	2/24/2014 01:57 PM
m,p-Xylene	**360**		**68**	**µg/Kg-dry**	1	2/24/2014 01:57 PM
o-Xylene	**92**		**34**	**µg/Kg-dry**	1	2/24/2014 01:57 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: South Wall **Lab ID:** 1402946-03
Collection Date: 2/19/2014 10:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	**41**		**34**	**µg/Kg-dry**	1	2/24/2014 01:57 PM
Xylenes, Total	**440**		**100**	**µg/Kg-dry**	1	2/24/2014 01:57 PM
Surr: 1,2-Dichloroethane-d4	*96.3*		*70-130*	*%REC*	1	2/24/2014 01:57 PM
Surr: 4-Bromofluorobenzene	*93.2*		*70-130*	*%REC*	1	2/24/2014 01:57 PM
Surr: Dibromofluoromethane	*97.8*		*70-130*	*%REC*	1	2/24/2014 01:57 PM
Surr: Toluene-d8	*100*		*70-130*	*%REC*	1	2/24/2014 01:57 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**	Prep: USDA Method 20B / 2/25/14		Analyst: **MELB**
Electrical Conductivity @ Saturation	**1.2**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**12**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**	Prep: EXTRACT / 2/22/14		Analyst: **AT**
pH	**8.3**			**s.u.**	1	2/22/2014 04:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: West Wall **Lab ID:** 1402946-04
Collection Date: 2/19/2014 09:20 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/21/14	Analyst: **IT**
DRO (C10-C28)	**9.5**		**4.6**	**mg/Kg-dry**	1	2/24/2014 05:36 PM
Surr: 4-Terphenyl-d14	*72.8*		*39-115*	*%REC*	1	2/24/2014 05:36 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 2/21/14	Analyst: **IT**
GRO (C6-C10)	ND		2.9	mg/Kg-dry	1	2/24/2014 05:43 PM
Surr: Toluene-d8	*109*		*50-150*	*%REC*	1	2/24/2014 05:43 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	ND		10	mg/L	20	2/25/2014 02:26 PM
Magnesium	**11**		**4.0**	**mg/L**	20	2/25/2014 02:26 PM
Sodium	**160**		**4.0**	**mg/L**	20	2/25/2014 02:26 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**10**		**0.010**	**none**	1	2/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 2/21/14	Analyst: **HL**
Acenaphthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Chrysene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Fluorene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Naphthalene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Pyrene	ND		7.4	µg/Kg-dry	1	2/24/2014 04:37 PM
Surr: 2-Fluorobiphenyl	*70.0*		*12-100*	*%REC*	1	2/24/2014 04:37 PM
Surr: 4-Terphenyl-d14	*83.1*		*25-137*	*%REC*	1	2/24/2014 04:37 PM
Surr: Nitrobenzene-d5	*80.3*		*37-107*	*%REC*	1	2/24/2014 04:37 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 2/21/14	Analyst: **RS**
Benzene	ND		35	µg/Kg-dry	1	2/24/2014 02:21 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	2/24/2014 02:21 PM
m,p-Xylene	ND		69	µg/Kg-dry	1	2/24/2014 02:21 PM
o-Xylene	ND		35	µg/Kg-dry	1	2/24/2014 02:21 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: West Wall **Lab ID:** 1402946-04
Collection Date: 2/19/2014 09:20 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	ND		35	µg/Kg-dry	1	2/24/2014 02:21 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	2/24/2014 02:21 PM
Surr: 1,2-Dichloroethane-d4	*96.5*		*70-130*	*%REC*	1	2/24/2014 02:21 PM
Surr: 4-Bromofluorobenzene	*91.7*		*70-130*	*%REC*	1	2/24/2014 02:21 PM
Surr: Dibromofluoromethane	*98.5*		*70-130*	*%REC*	1	2/24/2014 02:21 PM
Surr: Toluene-d8	*100*		*70-130*	*%REC*	1	2/24/2014 02:21 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **MELB**
Electrical Conductivity @ Saturation	**0.89**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**13**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**		Prep: EXTRACT / 2/22/14	Analyst: **AT**
pH	**9.2**			**s.u.**	1	2/22/2014 04:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: North Wall **Lab ID:** 1402946-05
Collection Date: 2/19/2014 09:25 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/21/14	Analyst: **IT**
DRO (C10-C28)	**30**		**4.9**	**mg/Kg-dry**	1	2/24/2014 06:06 PM
Surr: 4-Terphenyl-d14	*71.2*		*39-115*	*%REC*	1	2/24/2014 06:06 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 2/21/14	Analyst: **IT**
GRO (C6-C10)	**380**		**3.0**	**mg/Kg-dry**	1	2/24/2014 06:09 PM
Surr: Toluene-d8	*119*		*50-150*	*%REC*	1	2/24/2014 06:09 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	**29**		**10**	**mg/L**	20	2/25/2014 02:31 PM
Magnesium	**38**		**4.0**	**mg/L**	20	2/25/2014 02:31 PM
Sodium	**72**		**4.0**	**mg/L**	20	2/25/2014 02:31 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**2.1**		**0.010**	**none**	1	2/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 2/21/14	Analyst: **HL**
Acenaphthene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Acenaphthylene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Anthracene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Benzo(a)anthracene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Benzo(g,h,i)perylene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Chrysene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Fluoranthene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Fluorene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Naphthalene	**34**		**7.9**	**µg/Kg-dry**	1	2/24/2014 05:09 PM
Pyrene	ND		7.9	µg/Kg-dry	1	2/24/2014 05:09 PM
Surr: 2-Fluorobiphenyl	*68.8*		*12-100*	*%REC*	1	2/24/2014 05:09 PM
Surr: 4-Terphenyl-d14	*81.2*		*25-137*	*%REC*	1	2/24/2014 05:09 PM
Surr: Nitrobenzene-d5	*88.0*		*37-107*	*%REC*	1	2/24/2014 05:09 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 2/21/14	Analyst: **RS**
Benzene	**64**		**36**	**µg/Kg-dry**	1	2/24/2014 02:45 PM
Ethylbenzene	**430**		**36**	**µg/Kg-dry**	1	2/24/2014 02:45 PM
m,p-Xylene	**10,000**		**72**	**µg/Kg-dry**	1	2/24/2014 02:45 PM
o-Xylene	**1,600**		**36**	**µg/Kg-dry**	1	2/24/2014 02:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: North Wall **Lab ID:** 1402946-05
Collection Date: 2/19/2014 09:25 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	**1,500**		**36**	**µg/Kg-dry**	1	2/24/2014 02:45 PM
Xylenes, Total	**12,000**		**110**	**µg/Kg-dry**	1	2/24/2014 02:45 PM
Surr: 1,2-Dichloroethane-d4	*95.7*		*70-130*	*%REC*	1	2/24/2014 02:45 PM
Surr: 4-Bromofluorobenzene	*96.0*		*70-130*	*%REC*	1	2/24/2014 02:45 PM
Surr: Dibromofluoromethane	*96.2*		*70-130*	*%REC*	1	2/24/2014 02:45 PM
Surr: Toluene-d8	*119*		*70-130*	*%REC*	1	2/24/2014 02:45 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**	Prep: USDA Method 20B / 2/25/14		Analyst: **MELB**
Electrical Conductivity @ Saturation	**0.93**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**16**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**	Prep: EXTRACT / 2/22/14		Analyst: **AT**
pH	**8.6**			**s.u.**	1	2/22/2014 04:45 PM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: RMV 85-34-B-1 **Lab ID:** 1402946-06
Collection Date: 2/20/2014 09:45 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 2/21/14	Analyst: **RH**
Arsenic	**9.0**		**2.3**	**mg/Kg-dry**	5	2/23/2014 06:46 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**24**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: RMV 85-34-B-2 **Lab ID:** 1402946-07
Collection Date: 2/20/2014 09:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 2/21/14	Analyst: **RH**
Arsenic	**8.2**		**2.0**	**mg/Kg-dry**	5	2/23/2014 06:52 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**19**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM

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

ALS Group USA, Corp

Date: *25-Feb-14*

Client: HRL Compliance Solutions
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14 **Work Order:** 1402946
Sample ID: RMV 85-34-B-3 **Lab ID:** 1402946-08
Collection Date: 2/20/2014 09:55 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 2/21/14	Analyst: **RH**
Arsenic	**4.9**		**2.0**	**mg/Kg-dry**	5	2/23/2014 06:58 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Calcium	**84**		**10**	**mg/L**	20	2/25/2014 02:37 PM
Magnesium	**24**		**4.0**	**mg/L**	20	2/25/2014 02:37 PM
Sodium	**33**		**4.0**	**mg/L**	20	2/25/2014 02:37 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **RH**
Sodium Adsorption Ratio	**0.81**		**0.010**	**none**	1	2/25/2014
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 2/25/14	Analyst: **MELB**
Electrical Conductivity @ Saturation	**0.87**		**0.050**	**mmhos/cm @25**	10	2/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**14**		**0.050**	**% of sample**	1	2/22/2014 10:40 AM
PH			**SW9045D**		Prep: EXTRACT / 2/22/14	Analyst: **AT**
pH	**8.2**			**s.u.**	1	2/22/2014 04:45 PM

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

QC BATCH REPORT

Batch ID: **55973** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-55973-55973** Units: **mg/Kg** Analysis Date: **2/24/2014 09:32 AM**

Client ID: Run ID: **GC8_140224A** SeqNo: **2652258** Prep Date: **2/21/2014** DF: **1**

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	*1.312*	0	*1.667*	0	*78.7*	*39-115*	0			

LCS Sample ID: **DLCSS1-55973-55973** Units: **mg/Kg** Analysis Date: **2/24/2014 10:02 AM**

Client ID: Run ID: **GC8_140224A** SeqNo: **2652259** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	120.9	4.2	166.7	0	72.6	49-124	0			
Surr: 4-Terphenyl-d14	*1.113*	0	*1.667*	0	*66.8*	*39-115*	0			

MS Sample ID: **1402522-05A MS** Units: **mg/Kg** Analysis Date: **2/24/2014 10:32 AM**

Client ID: Run ID: **GC8_140224A** SeqNo: **2652260** Prep Date: **2/21/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	342.3	32	321.4	52.58	90.2	49-130	0			
Surr: 4-Terphenyl-d14	*1.622*	0	*3.214*	0	*50.5*	*39-115*	0			

MSD Sample ID: **1402522-05A MSD** Units: **mg/Kg** Analysis Date: **2/24/2014 11:01 AM**

Client ID: Run ID: **GC8_140224A** SeqNo: **2652261** Prep Date: **2/21/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	318.8	33	327.5	52.58	81.3	49-130	342.3	7.1	30	
Surr: 4-Terphenyl-d14	*1.703*	0	*3.275*	0	*52*	*39-115*	1.622	*4.86*	*30*	

The following samples were analyzed in this batch: 1402946-01B, 1402946-02B, 1402946-03B, 1402946-04B, 1402946-05B

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55975** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-55975-55975** Units: **µg/Kg** Analysis Date: **2/24/2014 12:49 PM**
Client ID: Run ID: **GC9_140224A** SeqNo: **2652573** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*5161*	0	*5000*	0	*103*	*50-150*	0			

LCS Sample ID: **LCS-55975-55975** Units: **µg/Kg** Analysis Date: **2/24/2014 11:32 AM**
Client ID: Run ID: **GC9_140224A** SeqNo: **2652572** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	561600	2,500	500000	0	112	70-130	0			
Surr: Toluene-d8	*4978*	0	*5000*	0	*99.6*	*50-150*	0			

MS Sample ID: **1402946-01A MS** Units: **µg/Kg** Analysis Date: **2/24/2014 10:00 PM**
Client ID: **Bottom** Run ID: **GC9_140224A** SeqNo: **2652679** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	489300	2,500	500000	0	97.9	70-130	0			
Surr: Toluene-d8	*5100*	0	*5000*	0	*102*	*50-150*	0			

MSD Sample ID: **1402946-01A MSD** Units: **µg/Kg** Analysis Date: **2/24/2014 10:25 PM**
Client ID: **Bottom** Run ID: **GC9_140224A** SeqNo: **2652680** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	467100	2,500	500000	0	93.4	70-130	489300	4.65	30	
Surr: Toluene-d8	*5129*	0	*5000*	0	*103*	*50-150*	5100	*0.577*	*30*	

The following samples were analyzed in this batch:

1402946-01A	1402946-02A	1402946-03A
1402946-04A	1402946-05A	

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **56020** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-56020-56020** Units: **mg/Kg** Analysis Date: **2/24/2014 03:48 PM**
Client ID: Run ID: **HG1_140224A** SeqNo: **2652482** Prep Date: **2/24/2014** 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-56020-56020** Units: **mg/Kg** Analysis Date: **2/24/2014 03:50 PM**
Client ID: Run ID: **HG1_140224A** SeqNo: **2652483** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1956	0.020	0.1665	0	117	80-120	0			

MS Sample ID: **1402737-05BMS** Units: **mg/Kg** Analysis Date: **2/24/2014 04:04 PM**
Client ID: Run ID: **HG1_140224A** SeqNo: **2652490** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1508	0.012	0.1009	0.0355	114	75-125	0			

MS Sample ID: **1402737-06BMS** Units: **mg/Kg** Analysis Date: **2/24/2014 04:11 PM**
Client ID: Run ID: **HG1_140224A** SeqNo: **2652493** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1663	0.013	0.1094	0.03462	120	75-125	0			

MSD Sample ID: **1402737-05BMSD** Units: **mg/Kg** Analysis Date: **2/24/2014 04:06 PM**
Client ID: Run ID: **HG1_140224A** SeqNo: **2652491** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1612	0.013	0.1077	0.0355	117	75-125	0.1508	6.7	35	

The following samples were analyzed in this batch: 1402946-01B

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55985** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-55985-55985** Units: **mg/Kg** Analysis Date: **2/23/2014 01:35 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650518** Prep Date: **2/21/2014** 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	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.102	0.50								J

LCS Sample ID: **LCS-55985-55985** Units: **mg/Kg** Analysis Date: **2/23/2014 01:41 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650519** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.554	0.25	5	0	91.1	80-120	0			
Barium	4.762	0.25	5	0	95.2	80-120	0			
Cadmium	4.669	0.10	5	0	93.4	80-120	0			
Chromium	4.554	0.25	5	0	91.1	80-120	0			
Copper	4.562	0.25	5	0	91.2	80-120	0			
Lead	4.784	0.25	5	0	95.7	80-120	0			
Nickel	4.455	0.25	5	0	89.1	80-120	0			
Selenium	4.302	0.25	5	0	86	80-120	0			
Silver	4.483	0.25	5	0	89.7	80-120	0			
Zinc	4.468	0.50	5	0	89.4	80-120	0			

MS Sample ID: **1402868-04BMS** Units: **mg/Kg** Analysis Date: **2/23/2014 02:54 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650531** Prep Date: **2/21/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.04	1.6	6.51	8.701	113	75-125	0			
Barium	28.77	1.6	6.51	22.32	99.1	75-125	0			
Cadmium	6.084	0.65	6.51	0.111	91.7	75-125	0			
Chromium	16.23	1.6	6.51	9.301	106	75-125	0			
Copper	22	1.6	6.51	18.09	60.2	75-125	0			S
Nickel	23.64	1.6	6.51	16.69	107	75-125	0			
Selenium	6.562	1.6	6.51	0.7139	89.8	75-125	0			
Silver	5.553	1.6	6.51	0.03491	84.8	75-125	0			
Zinc	70.02	3.3	6.51	50.57	299	75-125	0			SO

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55985** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **1402868-04BMS** Units: **mg/Kg** Analysis Date: **2/24/2014 12:44 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650893** Prep Date: **2/21/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	14.39	1.6	6.51	9.29	78.3	75-125	0			

MSD Sample ID: **1402868-04BMSD** Units: **mg/Kg** Analysis Date: **2/23/2014 03:00 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650532** Prep Date: **2/21/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.54	1.7	6.649	8.701	72.7	75-125	16.04	16.9	25	S
Barium	28.74	1.7	6.649	22.32	96.6	75-125	28.77	0.103	25	
Cadmium	5.941	0.66	6.649	0.111	87.7	75-125	6.084	2.38	25	
Chromium	15.64	1.7	6.649	9.301	95.4	75-125	16.23	3.69	25	
Copper	20.2	1.7	6.649	18.09	31.8	75-125	22	8.53	25	S
Nickel	21.51	1.7	6.649	16.69	72.4	75-125	23.64	9.44	25	S
Selenium	6.257	1.7	6.649	0.7139	83.4	75-125	6.562	4.77	25	
Silver	5.426	1.7	6.649	0.03491	81.1	75-125	5.553	2.33	25	
Zinc	108.1	3.3	6.649	50.57	865	75-125	70.02	42.8	25	SRO

MSD Sample ID: **1402868-04BMSD** Units: **mg/Kg** Analysis Date: **2/24/2014 01:09 AM**
Client ID: Run ID: **ICPMS1_140222A** SeqNo: **2650897** Prep Date: **2/21/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	13.61	1.7	6.649	9.29	65	75-125	14.39	5.55	25	S

The following samples were analyzed in this batch:

1402946-01B	1402946-06A	1402946-07A
1402946-08A		

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

QC BATCH REPORT

Batch ID: **56018** Instrument ID **ICPMS2** Method: **SW6020A**

DUP Sample ID: **1402946-08BDUP** Units: **mg/L** Analysis Date: **2/25/2014 02:43 PM**
Client ID: **RMV 85-34-B-3** Run ID: **ICPMS2_140225A** SeqNo: **2653949** Prep Date: **2/25/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	91.08	10	0	0	0	0-0	84.3	7.73		
Magnesium	25.68	4.0	0	0	0	0-0	23.88	7.26		
Sodium	34.8	4.0	0	0	0	0-0	32.68	6.28		

DUP Sample ID: **1402946-08BDUP** Units: **none** Analysis Date: **2/25/2014**
Client ID: **RMV 85-34-B-3** Run ID: **SAR_140225A** SeqNo: **2654025** Prep Date: **2/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.8296	0.010	0	0	0		0.8092	2.49	50	

The following samples were analyzed in this batch:

1402946-01C 1402946-02C 1402946-03C
1402946-04C 1402946-05C 1402946-08B

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55984** Instrument ID **SVMS4** Method: **SW8270**

MBLK Sample ID: **SBLKS1-55984-55984** Units: **µg/Kg** Analysis Date: **2/24/2014 12:10 PM**
Client ID: Run ID: **SVMS4_140224B** SeqNo: **2652203** Prep Date: **2/21/2014** DF: **1**

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								
Surr: 2-Fluorobiphenyl	*1365*	0	*1667*	0	*81.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1581*	0	*1667*	0	*94.8*	*25-137*	0			
Surr: Nitrobenzene-d5	*1598*	0	*1667*	0	*95.9*	*37-107*	0			

LCS Sample ID: **SLCSS1-55984-55984** Units: **µg/Kg** Analysis Date: **2/24/2014 09:54 AM**
Client ID: Run ID: **SVMS4_140224B** SeqNo: **2652202** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	551	6.7	666.7	0	82.6	45-110	0			
Acenaphthylene	550.7	6.7	666.7	0	82.6	45-105	0			
Anthracene	595.3	6.7	666.7	0	89.3	55-105	0			
Benzo(a)anthracene	589.7	6.7	666.7	0	88.4	50-110	0			
Benzo(a)pyrene	628	6.7	666.7	0	94.2	50-110	0			
Benzo(b)fluoranthene	609.7	6.7	666.7	0	91.4	45-115	0			
Benzo(g,h,i)perylene	621.3	6.7	666.7	0	93.2	40-125	0			
Benzo(k)fluoranthene	617.7	6.7	666.7	0	92.6	45-115	0			
Chrysene	545.7	6.7	666.7	0	81.8	55-110	0			
Dibenzo(a,h)anthracene	620.7	6.7	666.7	0	93.1	40-125	0			
Fluoranthene	616	6.7	666.7	0	92.4	55-115	0			
Fluorene	578.3	6.7	666.7	0	86.7	50-110	0			
Indeno(1,2,3-cd)pyrene	631.3	6.7	666.7	0	94.7	40-120	0			
Naphthalene	538.3	6.7	666.7	0	80.7	40-105	0			
Pyrene	576.3	6.7	666.7	0	86.4	45-125	0			
Surr: 2-Fluorobiphenyl	*1292*	0	*1667*	0	*77.5*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1458*	0	*1667*	0	*87.5*	*25-137*	0			
Surr: Nitrobenzene-d5	*1500*	0	*1667*	0	*90*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55984** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: **1402946-01B MS** Units: **µg/Kg** Analysis Date: **2/24/2014 07:51 PM**
Client ID: **Bottom** Run ID: **SVMS4_140224B** SeqNo: **2652888** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	999.7	13	1296	0	77.1	45-110	0			
Acenaphthylene	991.3	13	1296	0	76.5	45-105	0			
Anthracene	1116	13	1296	0	86.1	55-105	0			
Benzo(a)anthracene	1114	13	1296	0	86	50-110	0			
Benzo(a)pyrene	1179	13	1296	0	91	50-110	0			
Benzo(b)fluoranthene	1109	13	1296	0	85.5	45-115	0			
Benzo(g,h,i)perylene	960.9	13	1296	0	74.1	40-125	0			
Benzo(k)fluoranthene	1210	13	1296	0	93.4	45-115	0			
Chrysene	1050	13	1296	0	81	55-110	0			
Dibenzo(a,h)anthracene	1025	13	1296	0	79.1	40-125	0			
Fluoranthene	1191	13	1296	0	91.9	55-115	0			
Fluorene	1070	13	1296	0	82.6	50-110	0			
Indeno(1,2,3-cd)pyrene	1035	13	1296	0	79.9	40-120	0			
Naphthalene	969.9	13	1296	0	74.8	40-105	0			
Pyrene	1083	13	1296	0	83.6	45-125	0			
Surr: 2-Fluorobiphenyl	*2349*	0	*3240*	0	*72.5*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2783*	0	*3240*	0	*85.9*	*25-137*	0			
Surr: Nitrobenzene-d5	*2632*	0	*3240*	0	*81.3*	*37-107*	0			

MSD Sample ID: **1402946-01B MSD** Units: **µg/Kg** Analysis Date: **2/24/2014 08:24 PM**
Client ID: **Bottom** Run ID: **SVMS4_140224B** SeqNo: **2652890** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	956.3	13	1266	0	75.5	45-110	999.7	4.44	30	
Acenaphthylene	950.6	13	1266	0	75.1	45-105	991.3	4.19	30	
Anthracene	1063	13	1266	0	83.9	55-105	1116	4.93	30	
Benzo(a)anthracene	1073	13	1266	0	84.8	50-110	1114	3.75	30	
Benzo(a)pyrene	1110	13	1266	0	87.7	50-110	1179	6.04	30	
Benzo(b)fluoranthene	1053	13	1266	0	83.1	45-115	1109	5.19	30	
Benzo(g,h,i)perylene	891.1	13	1266	0	70.4	40-125	960.9	7.53	30	
Benzo(k)fluoranthene	1130	13	1266	0	89.3	45-115	1210	6.83	30	
Chrysene	982.3	13	1266	0	77.6	55-110	1050	6.63	30	
Dibenzo(a,h)anthracene	971.5	13	1266	0	76.7	40-125	1025	5.36	30	
Fluoranthene	1125	13	1266	0	88.8	55-115	1191	5.72	30	
Fluorene	1016	13	1266	0	80.3	50-110	1070	5.17	30	
Indeno(1,2,3-cd)pyrene	970.9	13	1266	0	76.7	40-120	1035	6.43	30	
Naphthalene	945.6	13	1266	0	74.7	40-105	969.9	2.54	30	
Pyrene	1016	13	1266	0	80.3	45-125	1083	6.37	30	
Surr: 2-Fluorobiphenyl	*2270*	0	*3165*	0	*71.7*	*12-100*	2349	*3.43*	*40*	
Surr: 4-Terphenyl-d14	*2640*	0	*3165*	0	*83.4*	*25-137*	2783	*5.3*	*40*	
Surr: Nitrobenzene-d5	*2630*	0	*3165*	0	*83.1*	*37-107*	2632	*0.105*	*40*	

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55984** Instrument ID **SVMS4** Method: **SW8270**

The following samples were analyzed in this batch:

1402946-01B	1402946-02B	1402946-03B
1402946-04B	1402946-05B	

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55974** Instrument ID **VMS9** Method: **SW8260B**

MBLK Sample ID: **MBLK-55974-55974** Units: **µg/Kg** Analysis Date: **2/21/2014 05:47 PM**
Client ID: Run ID: **VMS9_140221A** SeqNo: **2651158** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*966*	0	*1000*	0	*96.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*916.5*	0	*1000*	0	*91.6*	*70-130*	0			
Surr: Dibromofluoromethane	*990*	0	*1000*	0	*99*	*70-130*	0			
Surr: Toluene-d8	*989*	0	*1000*	0	*98.9*	*70-130*	0			

LCS Sample ID: **LCS-55974-55974** Units: **µg/Kg** Analysis Date: **2/21/2014 04:09 PM**
Client ID: Run ID: **VMS9_140221A** SeqNo: **2651157** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1046	30	1000	0	105	75-125	0			
Ethylbenzene	962	30	1000	0	96.2	75-125	0			
m,p-Xylene	1931	60	2000	0	96.6	80-125	0			
o-Xylene	962	30	1000	0	96.2	75-125	0			
Toluene	1022	30	1000	0	102	70-125	0			
Xylenes, Total	2893	90	3000	0	96.4	75-125	0			
Surr: 1,2-Dichloroethane-d4	*940*	0	*1000*	0	*94*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*991.5*	0	*1000*	0	*99.2*	*70-130*	0			
Surr: Dibromofluoromethane	*1008*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1001*	0	*1000*	0	*100*	*70-130*	0			

MS Sample ID: **1402858-05A MS** Units: **µg/Kg** Analysis Date: **2/25/2014 08:06 AM**
Client ID: Run ID: **VMS8_140224B** SeqNo: **2653380** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	877	30	1000	0	87.7	75-125	0			
Ethylbenzene	922.5	30	1000	0	92.2	75-125	0			
m,p-Xylene	1802	60	2000	32.5	88.5	80-125	0			
o-Xylene	933	30	1000	0	93.3	75-125	0			
Toluene	853	30	1000	0	85.3	70-125	0			
Xylenes, Total	2735	90	3000	32	90.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1038*	0	*1000*	0	*104*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1068*	0	*1000*	0	*107*	*70-130*	0			
Surr: Dibromofluoromethane	*1004*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*949.5*	0	*1000*	0	*95*	*70-130*	0			

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **55974** Instrument ID **VMS9** Method: **SW8260B**

MSD Sample ID: **1402858-05A MSD** Units: **µg/Kg** Analysis Date: **2/25/2014 08:30 AM**
Client ID: Run ID: **VMS8_140224B** SeqNo: **2653381** Prep Date: **2/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	882	30	1000	0	88.2	75-125	877	0.569	30	
Ethylbenzene	921	30	1000	0	92.1	75-125	922.5	0.163	30	
m,p-Xylene	1812	60	2000	32.5	89	80-125	1802	0.526	30	
o-Xylene	951	30	1000	0	95.1	75-125	933	1.91	30	
Toluene	851.5	30	1000	0	85.2	70-125	853	0.176	30	
Xylenes, Total	2762	90	3000	32	91	75-125	2735	1	30	
Surr: 1,2-Dichloroethane-d4	*1058*	0	*1000*	0	*106*	*70-130*	1038	*1.96*	*30*	
Surr: 4-Bromofluorobenzene	*1093*	0	*1000*	0	*109*	*70-130*	1068	*2.27*	*30*	
Surr: Dibromofluoromethane	*986.5*	0	*1000*	0	*98.6*	*70-130*	1004	*1.71*	*30*	
Surr: Toluene-d8	*954.5*	0	*1000*	0	*95.4*	*70-130*	949.5	*0.525*	*30*	

The following samples were analyzed in this batch: 1402946-01A 1402946-02A 1402946-03A 1402946-04A 1402946-05A

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **56005** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-56005-56005** Units: **s.u.** Analysis Date: **2/22/2014 04:45 PM**
Client ID: Run ID: **WETCHEM_140222D** SeqNo: **2650609** Prep Date: **2/22/2014** 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: **1402946-01B DUP** Units: **s.u.** Analysis Date: **2/22/2014 04:45 PM**
Client ID: **Bottom** Run ID: **WETCHEM_140222D** SeqNo: **2650611** Prep Date: **2/22/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.54	0	0	0	0	0-0	8.51	0.352	20	

The following samples were analyzed in this batch:

1402946-01B	1402946-02B	1402946-03B
1402946-04B	1402946-05B	1402946-08A

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **56045** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-56045-56045** Units: **mg/Kg** Analysis Date: **2/24/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140224G** SeqNo: **2652383** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50								

LCS Sample ID: **LCS-56045-56045** Units: **mg/Kg** Analysis Date: **2/24/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140224G** SeqNo: **2652384** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.084	0.50	2	0	104	80-120	0			

MS Sample ID: **1402946-01B MS** Units: **mg/Kg** Analysis Date: **2/24/2014 03:00 PM**
Client ID: **Bottom** Run ID: **WETCHEM_140224G** SeqNo: **2652389** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.909	0.50	1.984	0.24	84.1	75-125	0			

MS Sample ID: **1402946-01B MSI** Units: **mg/Kg** Analysis Date: **2/24/2014 03:00 PM**
Client ID: **Bottom** Run ID: **WETCHEM_140224G** SeqNo: **2652391** Prep Date: **2/24/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1236	49	1240	0.24	99.6	75-125	0			

MSD Sample ID: **1402946-01B MSD** Units: **mg/Kg** Analysis Date: **2/24/2014 03:00 PM**
Client ID: **Bottom** Run ID: **WETCHEM_140224G** SeqNo: **2652390** Prep Date: **2/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.016	0.50	1.984	0.24	89.5	75-125	1.909	5.46	20	

The following samples were analyzed in this batch: 1402946-01B

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

Client: HRL Compliance Solutions
Work Order: 1402946
Project: WPX RMV 85-34 Leaking Pipeline 2.19-2.20.14

QC BATCH REPORT

Batch ID: **R136040** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R136040** Units: **% of sample** Analysis Date: **2/22/2014 10:40 AM**
Client ID: Run ID: **MOIST_140222A** SeqNo: **2650270** 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-R136040** Units: **% of sample** Analysis Date: **2/22/2014 10:40 AM**
Client ID: Run ID: **MOIST_140222A** SeqNo: **2650269** 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: **1402946-05B DUP** Units: **% of sample** Analysis Date: **2/22/2014 10:40 AM**
Client ID: **North Wall** Run ID: **MOIST_140222A** SeqNo: **2650263** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.76	0.050	0	0	0	0-0	16.1	2.13	20	

DUP Sample ID: **1402951-01B DUP** Units: **% of sample** Analysis Date: **2/22/2014 10:40 AM**
Client ID: Run ID: **MOIST_140222A** SeqNo: **2650268** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.56	0.050	0	0	0	0-0	7.59	0.396	20	

The following samples were analyzed in this batch:

1402946-01B	1402946-02B	1402946-03B
1402946-04B	1402946-05B	1402946-06A
1402946-07A	1402946-08A	

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 # 1402946

PAGE 1 of 1

DISPOSAL (By Lab) or Return to Client

PROJECT NAME	WPX RMV 85-34 Scaling Pipe Inc	SAMPLER	Reed Wold
PROJECT No.		SITE ID	RMV 85-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 2/20/14

TURNAROUND 24 HR

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX 1620	DRO 12AH	SAR KC 1PH	Metals	Arsenic
1	Bottom	SO	2/19/14	9:00	3	8		X	X	X	X	
2	East Wall			9:10				X	X	X		
3	South Wall			10:00				X	X	X		
4	West Wall			9:20				X	X	X		
5	North Wall			9:25				X	X	X		
6	RMV 85-34-B-1		2/20/14	9:45	1							X
7	RMV 85-34-B-2		2/20/14	9:50	1							X
8	RMV 85-34-B-3		2/20/14	9:55	2					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: 4.8°C

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Reed Wold	2/20/14	
RECEIVED BY			2-20-14	15:00
RELINQUISHED BY			2-20-14	1600
RECEIVED BY		Diane F. Shaw	2/21/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **21-Feb-14 09:30**

Work Order: **1402946** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 21-Feb-14 (Date) Reviewed by: Ann Preston (eSignature) 21-Feb-14 (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):	4.8 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	2/21/2014 1:13:38 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:

From: (970) 424-4749
Lab Hub, LLC
127 E First Street
PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J14101402070326

Ship Date: 20FEB14
ActWgt: 75.0 LB
CAD: 103923490/INET3490

Dims: 21 X 14 X 16 IN

Delivery Address Bar Code

Ref # 1001-022014-4
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

BILL RECIPIENT

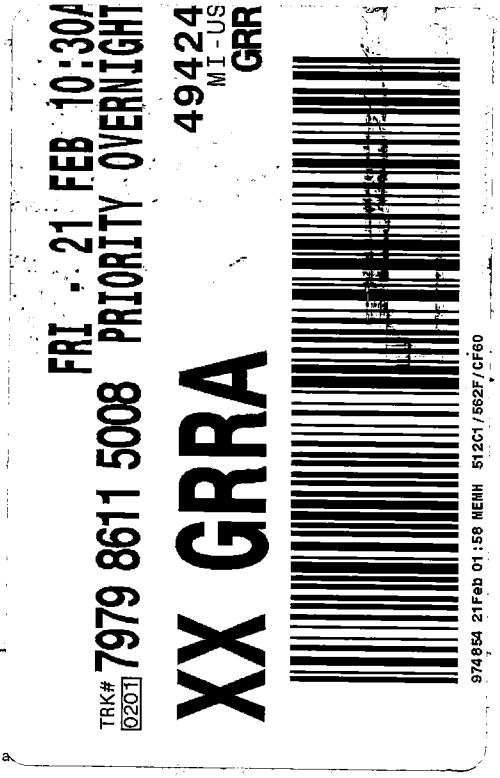
TRK# 0201 7979 8611 5008

FRI - 21 FEB 10:30A
PRIORITY OVERNIGHT

XX GRRA

49424
MI-US
GRR

522G1/562F/F220



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

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

23-Mar-2016

Karolina Blaney
WPX Energy Rocky Mountain, LLC
1058 Country Rd 215
Parachute, CO 81635

Re: **RWF 32-26 Backgrounds** Work Order: **1603979**

Dear Karolina,

ALS Environmental received 3 samples on 17-Mar-2016 09:30 AM for the analyses presented in the following report.

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

Sample results are compliant with 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 15.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 23-Mar-16

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 32-26 Backgrounds
Work Order: **1603979**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1603979-01	RWF 32-26-B-1	Soil		3/16/2016 14:10	3/17/2016 09:30	☐
1603979-02	RWF 32-26-B-2	Soil		3/16/2016 14:15	3/17/2016 09:30	☐
1603979-03	RWF 32-26-B-3	Soil		3/16/2016 14:20	3/17/2016 09:30	☐

ALS Group USA, Corp

Date: 23-Mar-16

Qualifier	Description
*	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
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
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

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

ALS Group USA, Corp

Date: *23-Mar-16*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 32-26 Backgrounds
Work Order: 1603979
Sample ID: RWF 32-26-B-1
Lab ID: 1603979-01
Collection Date: 3/16/2016 02:10 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/22/16	Analyst: **BL**
Arsenic	**5.7**		**0.35**	**mg/Kg-dry**	1	3/22/2016 07:39 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 3/20/16	Analyst: **BL**
Calcium	**28**		**20**	**mg/L**	40	3/21/2016 11:42 AM
Magnesium	ND		8.0	mg/L	40	3/21/2016 11:42 AM
Sodium	**460**		**8.0**	**mg/L**	40	3/21/2016 11:42 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/20/16	Analyst: **BL**
Sodium Adsorption Ratio	**20**		**0.010**	**none**	1	3/21/2016
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/20/16	Analyst: **JB**
Electrical Conductivity @ Saturation	**2.5**		**0.050**	**mmhos/cm @2**	10	3/21/2016 02:30 PM
MOISTURE			**SW3550C**			Analyst: **ED**
Moisture	**8.2**		**0.050**	**% of sample**	1	3/18/2016 05:19 PM
PH			**SW9045D**		Prep: EXTRACT / 3/18/16	Analyst: **JB**
pH	**9.5**			**s.u.**	1	3/18/2016 11:00 AM

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

ALS Group USA, Corp

Date: *23-Mar-16*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 32-26 Backgrounds
Work Order: 1603979
Sample ID: RWF 32-26-B-2
Lab ID: 1603979-02
Collection Date: 3/16/2016 02:15 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/21/16	Analyst: **BL**
Arsenic	**6.0**		**0.75**	**mg/Kg-dry**	2	3/22/2016 10:31 AM
MOISTURE			**SW3550C**			Analyst: **ED**
Moisture	**3.4**		**0.050**	**% of sample**	1	3/18/2016 05:19 PM

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

ALS Group USA, Corp

Date: *23-Mar-16*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 32-26 Backgrounds
Work Order: 1603979
Sample ID: RWF 32-26-B-3
Lab ID: 1603979-03
Collection Date: 3/16/2016 02:20 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/22/16	Analyst: **BL**
Arsenic	**7.5**		**0.40**	**mg/Kg-dry**	1	3/22/2016 08:02 PM
MOISTURE			**SW3550C**			Analyst: **ED**
Moisture	**3.9**		**0.050**	**% of sample**	1	3/18/2016 05:19 PM

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

Batch ID: **83665** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP Sample ID: **1603775-01ADUP** Units: **none** Analysis Date: **3/21/2016**

Client ID: Run ID: **SAR_160321A** SeqNo: **3741765** Prep Date: **3/20/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	9.927	0.010	0	0	0		9.031	9.45	50	

The following samples were analyzed in this batch: 1603979-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1603979
Project: RWF 32-26 Backgrounds

QC BATCH REPORT

Batch ID: **83752** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-83752-83752** Units: **mg/Kg** Analysis Date: **3/21/2016 06:18 PM**
Client ID: Run ID: **ICP2_160321A** SeqNo: **3742785** Prep Date: **3/21/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

LCS Sample ID: **LCS-83752-83752** Units: **mg/Kg** Analysis Date: **3/21/2016 06:24 PM**
Client ID: Run ID: **ICP2_160321A** SeqNo: **3742786** Prep Date: **3/21/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.113	0.25	5	0	102	80-120	0			

MS Sample ID: **16031109-08CMS** Units: **mg/Kg** Analysis Date: **3/22/2016 09:37 AM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3743718** Prep Date: **3/21/2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	18.37	3.9	7.825	6.918	146	75-125	0			S

MSD Sample ID: **16031109-08CMSD** Units: **mg/Kg** Analysis Date: **3/22/2016 09:42 AM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3743719** Prep Date: **3/21/2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.12	3.9	7.752	6.918	132	75-125	18.37	7.07	20	S

The following samples were analyzed in this batch: 1603979-02A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1603979
Project: RWF 32-26 Backgrounds

QC BATCH REPORT

Batch ID: **83809** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-83809-83809** Units: **mg/Kg** Analysis Date: **3/22/2016 05:33 PM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3744900** Prep Date: **3/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

LCS Sample ID: **LCS-83809-83809** Units: **mg/Kg** Analysis Date: **3/22/2016 05:39 PM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3744901** Prep Date: **3/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.181	0.25	5	0	104	80-120	0			

MS Sample ID: **16031095-01AMS** Units: **mg/Kg** Analysis Date: **3/22/2016 06:14 PM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3744907** Prep Date: **3/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.085	0.35	7.072	1.502	107	75-125	0			

MSD Sample ID: **16031095-01AMSD** Units: **mg/Kg** Analysis Date: **3/22/2016 06:20 PM**
Client ID: Run ID: **ICP2_160322A** SeqNo: **3744908** Prep Date: **3/22/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.628	0.35	7.092	1.502	115	75-125	9.085	5.81	20	

The following samples were analyzed in this batch: 1603979-01B 1603979-03A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1603979
Project: RWF 32-26 Backgrounds

QC BATCH REPORT

Batch ID: **83665** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **1603775-01A DUP** Units: **mmhos/cm @25°** Analysis Date: **3/21/2016 02:30 PM**
Client ID: Run ID: **WETCHEM_160321M** SeqNo: **3742084** Prep Date: **3/20/2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	9.12	0.050	0	0	0		7.61	18.1	50	

The following samples were analyzed in this batch: 1603979-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1603979
Project: RWF 32-26 Backgrounds

QC BATCH REPORT

Batch ID: **83691** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-83691-83691** Units: **s.u.** Analysis Date: **3/18/2016 11:00 AM**
Client ID: Run ID: **WETCHEM_160318E** SeqNo: **3739623** Prep Date: **3/18/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4	0	4	0	100	90-110	0			

DUP Sample ID: **1603960-01A DUP** Units: **s.u.** Analysis Date: **3/18/2016 11:00 AM**
Client ID: Run ID: **WETCHEM_160318E** SeqNo: **3739625** Prep Date: **3/18/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.81	0	0	0	0	0-0	7.92	1.4	20	

DUP Sample ID: **1603976-01B DUP** Units: **s.u.** Analysis Date: **3/18/2016 11:00 AM**
Client ID: Run ID: **WETCHEM_160318E** SeqNo: **3739630** Prep Date: **3/18/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.96	0	0	0	0	0-0	7.8	2.03	20	

The following samples were analyzed in this batch: 1603979-01B

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1603979
Project: RWF 32-26 Backgrounds

QC BATCH REPORT

Batch ID: **R183766** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R183766** Units: **% of sample** Analysis Date: **3/18/2016 05:19 PM**
Client ID: Run ID: **MOIST_160318C** SeqNo: **3740479** 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-R183766** Units: **% of sample** Analysis Date: **3/18/2016 05:19 PM**
Client ID: Run ID: **MOIST_160318C** SeqNo: **3740478** 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: **1603977-09B DUP** Units: **% of sample** Analysis Date: **3/18/2016 05:19 PM**
Client ID: Run ID: **MOIST_160318C** SeqNo: **3740463** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.2	0.050	0	0	0		18.53	1.8	20	

DUP Sample ID: **1603978-03A DUP** Units: **% of sample** Analysis Date: **3/18/2016 05:19 PM**
Client ID: Run ID: **MOIST_160318C** SeqNo: **3740472** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.4	0.050	0	0	0		18.35	0.272	20	

The following samples were analyzed in this batch: 1603979-01B 1603979-02A 1603979-03A

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER # 1603979

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

SAMPLER		DATE	3/16/2016
PROJECT NAME	RWF 32-26 backgrounds	SITE ID	RWF 32-26 backgrounds
PROJECT No.		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	WPX Energy	BILL TO COMPANY	WPX Energy
SEND REPORT TO	Blaney	INVOICE ATTN TO	Karolina Blaney; Leo Braun
ADDRESS		ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP		CITY / STATE / ZIP	Parachure CO 81635
PHONE		PHONE	970-683-2295
FAX		FAX	
E-MAIL	Karolina.blaney@wpxenergy.com;	E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com

TURNAROUND 5 days

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic	pH, EC, SAR
1	RWF 32-26-B-1	S	3/16/2016	14:10	1	8	x	x	x
2	RWF 32-26-B-2	S	3/16/2016	14:15	2	8	x	x	
3	RWF 32-26-B-3	S	3/16/2016	14:20	3	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

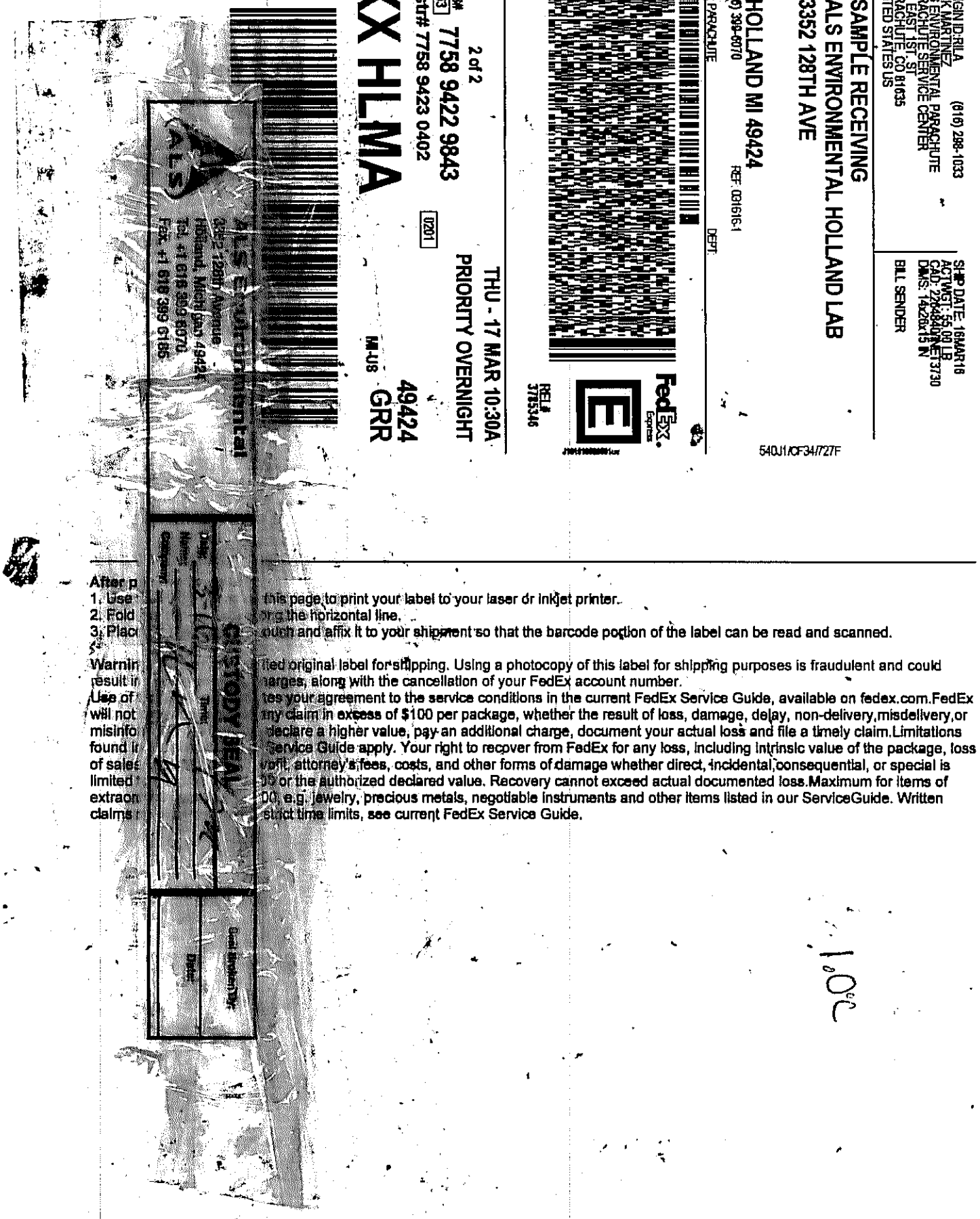
For metals or anions, please detail analytes below.

Comments: 1.0°C @

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	3/16/2016	16:00
RECEIVED BY			3-16-16	1600
RELINQUISHED BY			3-16-16	1630
RECEIVED BY		KEITH WIFFENER	3/17/16	0930
RELINQUISHED BY				
RECEIVED BY				



ORIGIN ID:RILA (616) 298-1033
NICK MARTINEZ
ALS ENVIRONMENTAL PARACHUTE
PARACHUTE SERVICE CENTER
127 EAST 1ST ST
PARACHUTE, CO 81635
UNITED STATES US

SHIP DATE: 16MAR16
ACTWGT: 55.00 LB
CAD: 2284840/NET3730
DIMS: 14x26x15 IN

BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE
HOLLAND MI 49424
(616) 399-6070
REF: 031616-1
PO: PARACHUTE DEPT:

FedEx Express

REL# 3785346

540J1/CF34/727F

2 of 2
MPS# 7758 9422 9843
0203
Mstr# 7758 9423 0402
0201

THU - 17 MAR 10:30A
PRIORITY OVERNIGHT

XX HLMA

49424
GRR
MI-US

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

CUSTODY SEAL

Date
Good Standing Day

After p
1. Use this page to print your label to your laser or inkjet printer.
2. Fold ong the horizontal line.
3. Plac ouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warnin fied original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in harges, along with the cancellation of your FedEx account number.
Use of tes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not my claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinfo declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found i Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited 00 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraor 00, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims 1 strict time limits, see current FedEx Service Guide.

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **17-Mar-16 09:30**

Work Order: **1603979** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 17-Mar-16 (Date) Reviewed by: Chad Whelton (eSignature) 18-Mar-16 (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):	1.0/1.0 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/17/2016 4:23:46 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:

15-Mar-2021

Mike Gardner
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **Terra Energy - RWF 13-4 - BKGD** Work Order: **21030614**

Dear Mike,

ALS Environmental received 3 samples on 05-Mar-2021 11:00 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 14.

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,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 15-Mar-21

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - RWF 13-4 - BKGD
Work Order: **21030614**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21030614-01	BKGD 1	Soil		3/3/2021 10:20	3/5/2021 11:00	☐
21030614-02	BKGD 2	Soil		3/3/2021 10:25	3/5/2021 11:00	☐
21030614-03	BKGD 3	Soil		3/3/2021 10:30	3/5/2021 11:00	☐

Qualifier	Description
*	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.

Acronym	Description
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

Units Reported	Description
% of sample	Percent of Sample
°C	Degrees Celcius
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: *15-Mar-21*

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - RWF 13-4 - BKGD
Sample ID: BKGD 1
Collection Date: 3/3/2021 10:20 AM

Work Order: 21030614
Lab ID: 21030614-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 3/10/21		Analyst: **DSC**
Arsenic	**1.4**		**0.19**	**0.73**	**mg/Kg-dry**	1	3/10/2021 20:46
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Calcium	**500**		**2.5**	**5.0**	**mg/L**	10	3/11/2021 16:01
Magnesium	**82**		**0.50**	**2.0**	**mg/L**	10	3/11/2021 16:01
Sodium	**14**		**1.8**	**2.0**	**mg/L**	10	3/11/2021 16:01
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Sodium Adsorption Ratio	**0.15**		**0.010**	**0.010**	**none**	1	3/11/2021
ELECTRICAL CONDUCTIVITY (SAR)		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **QTN**
Electrical Conductivity @ Saturation	**0.14**		**0.00055**	**0.0050**	**mmhos/cm @25°**	20	3/12/2021 11:35
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**43**		**0.10**	**0.10**	**% of sample**	1	3/10/2021 13:11
SOIL PH MEASURED IN WATER AT NOTED TEMP.		Method: **SW9045D**			Prep: SW9045D / 3/9/21		Analyst: **QTN**
pH	**7.20**		**0.10**	**0.10**	**s.u.**	1	3/10/2021 11:19
Temperature	**20.6**		**0.10**	**0.10**	**°C**	1	3/10/2021 11:19

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

ALS Group, USA

Date: *15-Mar-21*

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - RWF 13-4 - BKGD
Sample ID: BKGD 2
Collection Date: 3/3/2021 10:25 AM

Work Order: 21030614
Lab ID: 21030614-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 3/10/21		Analyst: **DSC**
Arsenic	**3.9**		**0.14**	**0.55**	**mg/Kg-dry**	1	3/10/2021 20:51
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Calcium	**340**		**2.5**	**5.0**	**mg/L**	10	3/11/2021 16:02
Magnesium	**49**		**0.50**	**2.0**	**mg/L**	10	3/11/2021 16:02
Sodium	**6.4**		**1.8**	**2.0**	**mg/L**	10	3/11/2021 16:02
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Sodium Adsorption Ratio	**0.086**		**0.010**	**0.010**	**none**	1	3/11/2021
ELECTRICAL CONDUCTIVITY (SAR)		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **QTN**
Electrical Conductivity @ Saturation	**0.094**		**0.00055**	**0.0050**	**mmhos/cm @25°**	20	3/12/2021 11:35
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**27**		**0.10**	**0.10**	**% of sample**	1	3/10/2021 13:11
SOIL PH MEASURED IN WATER AT NOTED TEMP.		Method: **SW9045D**			Prep: SW9045D / 3/9/21		Analyst: **QTN**
pH	**7.46**		**0.10**	**0.10**	**s.u.**	1	3/10/2021 11:19
Temperature	**20.4**		**0.10**	**0.10**	**°C**	1	3/10/2021 11:19

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

ALS Group, USA

Date: *15-Mar-21*

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - RWF 13-4 - BKGD
Sample ID: BKGD 3
Collection Date: 3/3/2021 10:30 AM

Work Order: 21030614
Lab ID: 21030614-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP		Method: **SW6010D**			Prep: SW3050B / 3/10/21		Analyst: **DSC**
Arsenic	**1.3**		**0.14**	**0.54**	**mg/Kg-dry**	1	3/10/2021 20:56
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Calcium	**500**		**2.5**	**5.0**	**mg/L**	10	3/11/2021 16:04
Magnesium	**78**		**0.50**	**2.0**	**mg/L**	10	3/11/2021 16:04
Sodium	**10**		**1.8**	**2.0**	**mg/L**	10	3/11/2021 16:04
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **STP**
Sodium Adsorption Ratio	**0.11**		**0.010**	**0.010**	**none**	1	3/11/2021
ELECTRICAL CONDUCTIVITY (SAR)		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/11/21		Analyst: **QTN**
Electrical Conductivity @ Saturation	**0.13**		**0.00055**	**0.0050**	**mmhos/cm @25°**	20	3/12/2021 11:35
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**36**		**0.10**	**0.10**	**% of sample**	1	3/10/2021 16:28
SOIL PH MEASURED IN WATER AT NOTED TEMP.		Method: **SW9045D**			Prep: SW9045D / 3/9/21		Analyst: **QTN**
pH	**7.31**		**0.10**	**0.10**	**s.u.**	1	3/10/2021 11:19
Temperature	**20.5**		**0.10**	**0.10**	**°C**	1	3/10/2021 11:19

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

QC BATCH REPORT

Batch ID: **173190** Instrument ID **ICP2** Method: **SW6010D**

MBLK Sample ID: **MBLK-173190-173190** Units: **mg/Kg** Analysis Date: **3/10/2021 06:46 PM**

Client ID: Run ID: **ICP2_210310A** SeqNo: **7203395** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								

LCS Sample ID: **LCS-173190-173190** Units: **mg/Kg** Analysis Date: **3/10/2021 07:01 PM**

Client ID: Run ID: **ICP2_210310A** SeqNo: **7203405** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.5	0.25	5	0	90	80-120	0			

MS Sample ID: **21030515-15AMS** Units: **mg/Kg** Analysis Date: **3/10/2021 07:38 PM**

Client ID: Run ID: **ICP2_210310A** SeqNo: **7203413** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.1	0.38	7.599	6.811	109	75-125	0			

MSD Sample ID: **21030515-15AMSD** Units: **mg/Kg** Analysis Date: **3/10/2021 07:43 PM**

Client ID: Run ID: **ICP2_210310A** SeqNo: **7203414** Prep Date: **3/10/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.04	0.38	7.587	6.811	82.2	75-125	15.1	14.6	20	

The following samples were analyzed in this batch: 21030614-01A 21030614-02A 21030614-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 21030614
Project: Terra Energy - RWF 13-4 - BKGD

QC BATCH REPORT

Batch ID: **173307** Instrument ID **ICPMS3** Method: **SW6020B**

DUP Sample ID: **21030612-01ADUP** Units: **mg/L** Analysis Date: **3/11/2021 03:53 PM**
Client ID: Run ID: **ICPMS3_210311A** SeqNo: **7204842** Prep Date: **3/11/2021** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	119.8	5.0	0	0	0	0-0	140.6	15.9		
Magnesium	35.6	2.0	0	0	0	0-0	43.28	19.5		
Sodium	15.81	2.0	0	0	0	0-0	17.74	11.5		

The following samples were analyzed in this batch: 21030614-01A 21030614-02A 21030614-03A

Batch ID: **173307** Instrument ID **SAR** Method: **USDA H60 Method**

DUP Sample ID: **21030612-01ADUP** Units: **none** Analysis Date: **3/11/2021**
Client ID: Run ID: **SAR_210311A** SeqNo: **7204867** Prep Date: **3/11/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.3259	0.010	0	0	0		0.3355	2.91	50	

The following samples were analyzed in this batch: 21030614-01A 21030614-02A 21030614-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 21030614
Project: Terra Energy - RWF 13-4 - BKGD

QC BATCH REPORT

Batch ID: **173170** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-173170-173170** Units: **s.u.** Analysis Date: **3/10/2021 11:19 AM**
Client ID: Run ID: **WETCHEM_210310M** SeqNo: **7201024** Prep Date: **3/9/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.04	0.10	4	0	101	90-110	0			

DUP Sample ID: **21030612-01A DUP** Units: **s.u.** Analysis Date: **3/10/2021 11:19 AM**
Client ID: Run ID: **WETCHEM_210310M** SeqNo: **7201026** Prep Date: **3/9/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.85	0.10	0	0	0	0-0	7.77	1.02	20	
Temperature	20.7	0.10	0	0	0		20.8	0.482		

DUP Sample ID: **21030616-01A DUP** Units: **s.u.** Analysis Date: **3/10/2021 11:19 AM**
Client ID: Run ID: **WETCHEM_210310M** SeqNo: **7201034** Prep Date: **3/9/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.65	0.10	0	0	0	0-0	7.7	0.651	20	
Temperature	20.5	0.10	0	0	0		20.7	0.971		

The following samples were analyzed in this batch: 21030614-01A 21030614-02A 21030614-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 21030614
Project: Terra Energy - RWF 13-4 - BKGD

QC BATCH REPORT

Batch ID: **173307** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **21030612-01A DUP** Units: **mmhos/cm @25°** Analysis Date: **3/12/2021 11:35 AM**

Client ID: Run ID: **WETCHEM_210312C** SeqNo: **7207603** Prep Date: **3/11/2021** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.0498	0.0050	0	0	0		0.0464	7.07	50	

The following samples were analyzed in this batch: 21030614-01A 21030614-02A 21030614-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 21030614
Project: Terra Energy - RWF 13-4 - BKGD

QC BATCH REPORT

Batch ID: **R311535** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R311535** Units: **% of sample** Analysis Date: **3/10/2021 01:11 PM**
Client ID: Run ID: **MOIST_210310B** SeqNo: **7203957** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R311535** Units: **% of sample** Analysis Date: **3/10/2021 01:11 PM**
Client ID: Run ID: **MOIST_210310B** SeqNo: **7203956** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **21030515-53A DUP** Units: **% of sample** Analysis Date: **3/10/2021 01:11 PM**
Client ID: Run ID: **MOIST_210310B** SeqNo: **7203937** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.78	0.10	0	0	0	0-0	14.94	1.08	10	

DUP Sample ID: **21030542-04A DUP** Units: **% of sample** Analysis Date: **3/10/2021 01:11 PM**
Client ID: Run ID: **MOIST_210310B** SeqNo: **7203945** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	2.48	0.10	0	0	0	0-0	2.35	5.38	10	

The following samples were analyzed in this batch: 21030614-01A 21030614-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 21030614
Project: Terra Energy - RWF 13-4 - BKGD

QC BATCH REPORT

Batch ID: **R311537** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R311537** Units: **% of sample** Analysis Date: **3/10/2021 04:28 PM**
Client ID: Run ID: **MOIST_210310D** SeqNo: **7203995** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R311537** Units: **% of sample** Analysis Date: **3/10/2021 04:28 PM**
Client ID: Run ID: **MOIST_210310D** SeqNo: **7203994** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **21030612-01A DUP** Units: **% of sample** Analysis Date: **3/10/2021 04:28 PM**
Client ID: Run ID: **MOIST_210310D** SeqNo: **7203981** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	19.14	0.10	0	0	0	0-0	19.59	2.32	10	

DUP Sample ID: **21030614-03A DUP** Units: **% of sample** Analysis Date: **3/10/2021 04:28 PM**
Client ID: **BKGD 3** Run ID: **MOIST_210310D** SeqNo: **7203985** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	36.05	0.10	0	0	0	0-0	35.9	0.417	10	

The following samples were analyzed in this batch: 21030614-03A

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

ALS Laboratory Group

3352 128th Avenue, Holland, MI 49424
TF: 616 399 6070 FX: 616 399 6185

Chain-of-Custody

Form 202r8

WORKORDER # 21030614

PAGE 1 of 2

DISPOSAL By Lab or Return to Client

PROJECT NAME	Terra Energy - RWF 13-4 - BKGD	SITE ID	RWF 13-4
PROJECT No.		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL COMPLIANCE SOLUTIONS Inc.	BILL TO COMPANY	Terra Energy
SEND REPORT TO	KRIS ROWE & MIKE GARDNER	INVOICE ATTN TO	Mike Gardner, Tammy Gose
ADDRESS	2385 F 1/2	ADDRESS	1058 CR 2015
CITY / STATE / ZIP	GRAND JUNCTION CO 81505	CITY / STATE / ZIP	Parachute CO, 81635
PHONE	970-243-3271	PHONE	970-263-2760
FAX	970-243-3280	FAX	
E-MAIL	KROWE@HRLCOMP.COM	E-MAIL	mgardner@terraep.com tgose@terraep.com

DATE 3/3/2021

TURNAROUND STD 5 Day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO	GRO	BTEX	910-1 Metals	Semi Vols - PAH	SAR / EC / pH	ARSENIC
	BKGD 1	S	3/3/2021	1020	1								X	X
	BKGD 2	S	3/3/2021	1025	1								X	X
	BKGD 3	S	3/3/2021	1030	1								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:	QC PACKAGE (check below)
1.8° C IR	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Kris Rowe	3/3/2021	1300
RECEIVED BY			3.3.21	1400
RELINQUISHED BY			3.3.21	1830
RECEIVED BY		Kevin Wiezkind	3/6/21	1100
RELINQUISHED BY				
RECEIVED BY				

ALS Group, USA

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **05-Mar-21 11:00**

Work Order: **21030614** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 08-Mar-21 (Date) Reviewed by: Chad Whelton (eSignature) 08-Mar-21 (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):	1.8/2.8 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/8/2021 8:36:41 AM		
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: