

Legend

- Sample Location
- Existing Road
- Existing Pad Limit of Disturbance

RGU 23-23-198
Arsenic Background Sample Location Map
T1S R98W, Section 23

April 30, 2014





18-Dec-2013

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

Re: **WPX RGU 23-23-198 12.5.13**

Work Order: **1312428**

Dear Mark,

ALS Environmental received 6 samples on 09-Dec-2013 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 32.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

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Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Work Order: 1312428

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1312428-01	Pit	Soil		12/5/2013 10:45	12/9/2013 09:30	<input type="checkbox"/>
1312428-02	RGU-23-23-198-B-1	Soil		12/5/2013 11:30	12/9/2013 09:30	<input type="checkbox"/>
1312428-03	RGU-23-23-198-B-2	Soil		12/5/2013 11:35	12/9/2013 09:30	<input type="checkbox"/>
1312428-04	RGU-23-23-198-B-3	Soil		12/5/2013 11:40	12/9/2013 09:30	<input type="checkbox"/>
1312428-05	RGU-23-23-198-B-4	Soil		12/5/2013 11:45	12/9/2013 09:30	<input type="checkbox"/>
1312428-06	RGU-23-23-198-B-5	Soil		12/5/2013 11:50	12/9/2013 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Work Order: 1312428

Case Narrative

Batch 54021 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 54033 sample 1312428-01 DRO surrogate recovery was high due to matrix interference. The DRO result may be biased high.

Batch 54156 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
WorkOrder: 1312428

QUALIFIERS, ACRONYMS, UNITS

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

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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
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: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: Pit
Collection Date: 12/5/2013 10:45 AM

Work Order: 1312428
Lab ID: 1312428-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	660		SW8015M		Prep Date: 12/10/2013	Analyst: IT
			6.3	mg/Kg-dry	1	12/11/2013 02:54 AM
Surr: 4-Terphenyl-d14	350	S	39-115	%REC	1	12/11/2013 02:54 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	16		SW8015		Prep Date: 12/5/2013	Analyst: IT
			3.8	mg/Kg-dry	1	12/10/2013 07:42 PM
Surr: Toluene-d8	111		50-150	%REC	1	12/10/2013 07:42 PM
MERCURY BY CVAA						
Mercury	ND		SW7471		Prep Date: 12/13/2013	Analyst: LR
			0.027	mg/Kg-dry	1	12/13/2013 05:02 PM
METALS BY ICP-MS						
Arsenic	5.2		SW6020A		Prep Date: 12/16/2013	Analyst: ML
			2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Barium	15,000		290	mg/Kg-dry	500	12/17/2013 12:29 PM
Cadmium	ND		1.2	mg/Kg-dry	5	12/16/2013 08:16 PM
Chromium	26		2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Copper	26		5.8	mg/Kg-dry	10	12/17/2013 12:35 PM
Lead	10		2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Nickel	16		2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Selenium	ND		2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Silver	ND		2.9	mg/Kg-dry	5	12/16/2013 08:16 PM
Zinc	59		12	mg/Kg-dry	10	12/17/2013 12:35 PM
SOLUBLE CATIONS FOR SAR						
Calcium	15		SW6020A		Prep Date: 12/12/2013	Analyst: ML
			10	mg/L	20	12/14/2013 09:59 PM
Magnesium	6.0		4.0	mg/L	20	12/14/2013 09:59 PM
Sodium	2,200		4.0	mg/L	20	12/14/2013 09:59 PM
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	120		USDA H60 METHO		Prep Date: 12/12/2013	Analyst: ML
			0.010	none	1	12/16/2013
SEMI-VOLATILE ORGANIC COMPOUNDS						
Acenaphthene	ND		SW8270		Prep Date: 12/10/2013	Analyst: RM
			10	µg/Kg-dry	1	12/11/2013 05:56 AM
Acenaphthylene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Anthracene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Benzo(a)anthracene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Benzo(a)pyrene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Benzo(b)fluoranthene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Benzo(g,h,i)perylene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Benzo(k)fluoranthene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Chrysene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Dibenzo(a,h)anthracene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Fluoranthene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM

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

ALS Group USA, Corp

Date: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: Pit
Collection Date: 12/5/2013 10:45 AM

Work Order: 1312428
Lab ID: 1312428-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Indeno(1,2,3-cd)pyrene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Naphthalene	69		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Pyrene	ND		10	µg/Kg-dry	1	12/11/2013 05:56 AM
Surr: 2-Fluorobiphenyl	69.1		12-100	%REC	1	12/11/2013 05:56 AM
Surr: 4-Terphenyl-d14	80.3		25-137	%REC	1	12/11/2013 05:56 AM
Surr: Nitrobenzene-d5	42.0		37-107	%REC	1	12/11/2013 05:56 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep Date: 12/3/2013 Analyst: RS		
Benzene	120		46	µg/Kg-dry	1	12/12/2013 05:16 AM
Ethylbenzene	160		46	µg/Kg-dry	1	12/12/2013 05:16 AM
m,p-Xylene	360		92	µg/Kg-dry	1	12/12/2013 05:16 AM
o-Xylene	110		46	µg/Kg-dry	1	12/12/2013 05:16 AM
Toluene	410		46	µg/Kg-dry	1	12/12/2013 05:16 AM
Xylenes, Total	470		140	µg/Kg-dry	1	12/12/2013 05:16 AM
Surr: 1,2-Dichloroethane-d4	99.4		70-130	%REC	1	12/12/2013 05:16 AM
Surr: 4-Bromofluorobenzene	98.6		70-130	%REC	1	12/12/2013 05:16 AM
Surr: Dibromofluoromethane	95.2		70-130	%REC	1	12/12/2013 05:16 AM
Surr: Toluene-d8	92.0		70-130	%REC	1	12/12/2013 05:16 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep Date: 12/12/2013 Analyst: JB		
Electrical Conductivity @ Saturation	14		0.25	mmhos/cm @25	50	12/12/2013 03:20 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: EE		
Chromium, Trivalent	25		0.76	mg/Kg-dry	1	12/17/2013 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep Date: 12/10/2013 Analyst: MB		
Chromium, Hexavalent	ND		0.76	mg/Kg-dry	1	12/10/2013 09:45 AM
MOISTURE			A2540 G	Analyst: MEB		
Moisture	34		0.050	% of sample	1	12/11/2013 02:40 PM
PH			SW9045D	Prep Date: 12/10/2013 Analyst: JB		
pH	8.2			s.u.	1	12/10/2013 04:00 PM

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

ALS Group USA, Corp

Date: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: RGU-23-23-198-B-1
Collection Date: 12/5/2013 11:30 AM

Work Order: 1312428
Lab ID: 1312428-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 12/16/2013	Analyst: ML
Arsenic	2.8		2.4	mg/Kg-dry	5	12/16/2013 08:21 PM
MOISTURE			A2540 G			Analyst: MEB
Moisture	20		0.050	% of sample	1	12/11/2013 02:40 PM

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

ALS Group USA, Corp**Date:** 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: RGU-23-23-198-B-2
Collection Date: 12/5/2013 11:35 AM

Work Order: 1312428
Lab ID: 1312428-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS						
Arsenic	ND		SW6020A 2.1	mg/Kg-dry	Prep Date: 12/16/2013 5	Analyst: ML 12/16/2013 08:27 PM
MOISTURE						
Moisture	16		A2540 G 0.050	% of sample	1	Analyst: MEB 12/11/2013 02:40 PM

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

ALS Group USA, Corp

Date: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: RGU-23-23-198-B-3
Collection Date: 12/5/2013 11:40 AM

Work Order: 1312428
Lab ID: 1312428-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 12/16/2013	Analyst: ML
Arsenic	3.1		2.5	mg/Kg-dry	5	12/16/2013 08:33 PM
MOISTURE			A2540 G			Analyst: MEB
Moisture	20		0.050	% of sample	1	12/11/2013 02:40 PM

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

ALS Group USA, Corp

Date: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: RGU-23-23-198-B-4
Collection Date: 12/5/2013 11:45 AM

Work Order: 1312428
Lab ID: 1312428-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 12/16/2013	Analyst: ML
Arsenic	3.3		2.3	mg/Kg-dry	5	12/16/2013 08:39 PM
MOISTURE			A2540 G			Analyst: MEB
Moisture	14		0.050	% of sample	1	12/11/2013 02:40 PM

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

ALS Group USA, Corp

Date: 18-Dec-13

Client: HRL Compliance Solutions
Project: WPX RGU 23-23-198 12.5.13
Sample ID: RGU-23-23-198-B-5
Collection Date: 12/5/2013 11:50 AM

Work Order: 1312428
Lab ID: 1312428-06
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 12/16/2013	Analyst: ML
Arsenic	2.6		2.4	mg/Kg-dry	5	12/16/2013 08:45 PM
MOISTURE			A2540 G			Analyst: MEB
Moisture	18		0.050	% of sample	1	12/11/2013 02:40 PM

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54033** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-54033-54033				Units: mg/Kg		Analysis Date: 12/10/2013 06:56 PM		
Client ID:		Run ID: GC8_131210B				SeqNo: 2574761		Prep Date: 12/10/2013		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								
<i>Surr: 4-Terphenyl-d14</i>	1.082	0	1.667	0	64.9	39-115	0			

LCS		Sample ID: DLCSS1-54033-54033				Units: mg/Kg		Analysis Date: 12/10/2013 07:26 PM		
Client ID:		Run ID: GC8_131210B				SeqNo: 2574765		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	168.4	4.2	166.7	0	101	49-124	0			
<i>Surr: 4-Terphenyl-d14</i>	1.178	0	1.667	0	70.7	39-115	0			

MS		Sample ID: 1312475-01A MS				Units: mg/Kg		Analysis Date: 12/10/2013 07:56 PM		
Client ID:		Run ID: GC8_131210B				SeqNo: 2574768		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	459.2	12	479.6	175.7	59.1	49-130	0			
<i>Surr: 4-Terphenyl-d14</i>	2.907	0	4.796	0	60.6	39-115	0			

MSD		Sample ID: 1312475-01A MSD				Units: mg/Kg		Analysis Date: 12/10/2013 08:26 PM		
Client ID:		Run ID: GC8_131210B				SeqNo: 2574770		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	511.1	12	487.9	175.7	68.7	49-130	459.2	10.7	30	
<i>Surr: 4-Terphenyl-d14</i>	3.087	0	4.879	0	63.3	39-115	2.907	6.01	30	

The following samples were analyzed in this batch: 1312428-01B

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54022** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: MBLK-54022-54022				Units: µg/Kg		Analysis Date: 12/10/2013 07:18 PM		
Client ID:		Run ID: GC10_131210A				SeqNo: 2573493		Prep Date: 12/5/2013		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	5446	0	5000	0	109	50-150	0			

LCS		Sample ID: LCS-54022-54022				Units: µg/Kg		Analysis Date: 12/10/2013 06:55 PM		
Client ID:		Run ID: GC10_131210A				SeqNo: 2573490		Prep Date: 12/5/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	436100	2,500	500000	0	87.2	70-130	0			
Surr: Toluene-d8	5694	0	5000	0	114	50-150	0			

MS		Sample ID: 1312478-01A MS				Units: µg/Kg		Analysis Date: 12/10/2013 08:29 PM		
Client ID:		Run ID: GC10_131210A				SeqNo: 2573501		Prep Date: 12/5/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	478000	2,500	500000	0	95.6	70-130	0			
Surr: Toluene-d8	5765	0	5000	0	115	50-150	0			

MSD		Sample ID: 1312478-01A MSD				Units: µg/Kg		Analysis Date: 12/10/2013 08:52 PM		
Client ID:		Run ID: GC10_131210A				SeqNo: 2573503		Prep Date: 12/5/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	463900	2,500	500000	0	92.8	70-130	478000	2.99	30	
Surr: Toluene-d8	5644	0	5000	0	113	50-150	5765	2.11	30	

The following samples were analyzed in this batch:

1312428-01A

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54134** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-54134-54134				Units: mg/Kg		Analysis Date: 12/13/2013 04:58 PM		
Client ID:		Run ID: HG1_131213B				SeqNo: 2578408		Prep Date: 12/13/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-54134-54134				Units: mg/Kg		Analysis Date: 12/13/2013 05:00 PM		
Client ID:		Run ID: HG1_131213B				SeqNo: 2578409		Prep Date: 12/13/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1751 0.020 0.1665 0 105 80-120 0

MS		Sample ID: 1312428-01BMS				Units: mg/Kg		Analysis Date: 12/13/2013 05:05 PM		
Client ID: Pit		Run ID: HG1_131213B				SeqNo: 2578411		Prep Date: 12/13/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.174 0.018 0.148 0.01723 106 75-125 0

MSD		Sample ID: 1312428-01BMSD				Units: mg/Kg		Analysis Date: 12/13/2013 05:07 PM		
Client ID: Pit		Run ID: HG1_131213B				SeqNo: 2578412		Prep Date: 12/13/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1781 0.017 0.1439 0.01723 112 75-125 0.174 2.33 35

The following samples were analyzed in this batch:

1312428-01B

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54096** Instrument ID **ICPMS2** Method: **SW6020A**

DUP		Sample ID: 1312393-03CDUP				Units: mg/L		Analysis Date: 12/14/2013 09:20 PM		
Client ID:		Run ID: ICPMS2_131214A				SeqNo: 2579239		Prep Date: 12/12/2013		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	61.84	10	0	0	0	0-0	66.44	7.17		
Magnesium	25.5	4.0	0	0	0	0-0	25.8	1.17		
Sodium	31.88	4.0	0	0	0	0-0	33.54	5.07		

The following samples were analyzed in this batch:

1312428-01C

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

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54156** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-54156-54156				Units: mg/Kg		Analysis Date: 12/16/2013 04:54 PM		
Client ID:		Run ID: ICPMS1_131216A				SeqNo: 2581871		Prep Date: 12/16/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.002224	0.10								J
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	0.001933	0.25								J
Zinc	0.04074	0.50								J

LCS		Sample ID: LCS-54156-54156				Units: mg/Kg		Analysis Date: 12/16/2013 04:59 PM		
Client ID:		Run ID: ICPMS1_131216A				SeqNo: 2581872		Prep Date: 12/16/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.42	0.25	5	0	88.4	80-120	0			
Barium	4.82	0.25	5	0	96.4	80-120	0			
Cadmium	4.743	0.10	5	0	94.9	80-120	0			
Chromium	4.646	0.25	5	0	92.9	80-120	0			
Copper	4.73	0.25	5	0	94.6	80-120	0			
Lead	4.898	0.25	5	0	98	80-120	0			
Nickel	4.665	0.25	5	0	93.3	80-120	0			
Selenium	4.282	0.25	5	0	85.6	80-120	0			
Silver	4.882	0.25	5	0	97.6	80-120	0			
Zinc	4.561	0.50	5	0	91.2	80-120	0			

MS		Sample ID: 1312357-12AMS				Units: mg/Kg		Analysis Date: 12/16/2013 05:48 PM		
Client ID:		Run ID: ICPMS1_131216A				SeqNo: 2581890		Prep Date: 12/16/2013		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.6	2.0	8.039	7.808	84.5	75-125	0			
Barium	29.4	2.0	8.039	32.48	-38.4	75-125	0			SO
Cadmium	7.801	0.80	8.039	0.2739	93.6	75-125	0			
Chromium	19.97	2.0	8.039	14.47	68.5	75-125	0			S
Lead	88.99	2.0	8.039	116	-336	75-125	0			SO
Nickel	14.55	2.0	8.039	9.348	64.7	75-125	0			S
Selenium	8.678	2.0	8.039	2.901	71.9	75-125	0			S
Silver	7.637	2.0	8.039	0.1214	93.5	75-125	0			

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54156** Instrument ID **ICPMS1** Method: **SW6020A**

MS				Sample ID: 1312357-12AMS				Units: mg/Kg			Analysis Date: 12/17/2013 05:24 PM		
Client ID:				Run ID: ICPMS1_131217A				SeqNo: 2583620		Prep Date: 12/16/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Copper	58.08	2.0	8.039	69.49	-142	75-125	0			SO			
Zinc	37.85	4.0	8.039	44.98	-88.6	75-125	0			SO			

MSD				Sample ID: 1312357-12AMSD			Units: mg/Kg		Analysis Date: 12/16/2013 05:56 PM		
Client ID:			Run ID: ICPMS1_131216A			SeqNo: 2581892		Prep Date: 12/16/2013		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	18.96	2.1	8.224	7.808	136	75-125	14.6	26	25	SR	
Barium	36.16	2.1	8.224	32.48	44.6	75-125	29.4	20.6	25	S	
Cadmium	9.038	0.82	8.224	0.2739	107	75-125	7.801	14.7	25		
Chromium	24.93	2.1	8.224	14.47	127	75-125	19.97	22.1	25	S	
Lead	102.4	2.1	8.224	116	-166	75-125	88.99	14	25	SO	
Nickel	17.55	2.1	8.224	9.348	99.8	75-125	14.55	18.7	25		
Selenium	9.947	2.1	8.224	2.901	85.7	75-125	8.678	13.6	25		
Silver	8.762	2.1	8.224	0.1214	105	75-125	7.637	13.7	25		

MSD				Sample ID: 1312357-12AMSD				Units: mg/Kg			Analysis Date: 12/17/2013 05:30 PM			
Client ID:				Run ID: ICPMS1_131217A				SeqNo:2583621			Prep Date: 12/16/2013		DF: 5	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Copper		58.39	2.1	8.224	69.49	-135	75-125	58.08	0.531	25	SO			
Zinc		39.58	4.1	8.224	44.98	-65.6	75-125	37.85	4.47	25	SO			

The following samples were analyzed in this batch:

1312428-01B	1312428-02A	1312428-03A
1312428-04A	1312428-05A	1312428-06A

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

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54032** Instrument ID **SVMS6** Method: **SW8270**

MBLK		Sample ID: SBLKS1-54032-54032				Units: µg/Kg		Analysis Date: 12/10/2013 07:46 PM		
Client ID:		Run ID: SVMS6_131210A				SeqNo: 2574101		Prep Date: 12/10/2013		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	1197	0	1667	0	71.8	12-100	0			
Surr: 4-Terphenyl-d14	1635	0	1667	0	98.1	25-137	0			
Surr: Nitrobenzene-d5	834	0	1667	0	50	37-107	0			

LCS		Sample ID: SLCSS1-54032-54032				Units: µg/Kg		Analysis Date: 12/10/2013 08:06 PM		
Client ID:		Run ID: SVMS6_131210A				SeqNo: 2574102		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	466	6.7	666.7	0	69.9	45-110	0			
Acenaphthylene	479	6.7	666.7	0	71.8	45-105	0			
Anthracene	514	6.7	666.7	0	77.1	55-105	0			
Benzo(a)anthracene	461	6.7	666.7	0	69.1	50-110	0			
Benzo(a)pyrene	513.7	6.7	666.7	0	77	50-110	0			
Benzo(b)fluoranthene	437.3	6.7	666.7	0	65.6	45-115	0			
Benzo(g,h,i)perylene	588.7	6.7	666.7	0	88.3	40-125	0			
Benzo(k)fluoranthene	498.7	6.7	666.7	0	74.8	45-115	0			
Chrysene	568	6.7	666.7	0	85.2	55-110	0			
Dibenzo(a,h)anthracene	542.7	6.7	666.7	0	81.4	40-125	0			
Fluoranthene	575.3	6.7	666.7	0	86.3	55-115	0			
Fluorene	514.3	6.7	666.7	0	77.1	50-110	0			
Indeno(1,2,3-cd)pyrene	677	6.7	666.7	0	102	40-120	0			
Naphthalene	467	6.7	666.7	0	70	40-105	0			
Pyrene	603.3	6.7	666.7	0	90.5	45-125	0			
Surr: 2-Fluorobiphenyl	1278	0	1667	0	76.7	12-100	0			
Surr: 4-Terphenyl-d14	1701	0	1667	0	102	25-137	0			
Surr: Nitrobenzene-d5	855.3	0	1667	0	51.3	37-107	0			

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54032** Instrument ID **SVMS6** Method: **SW8270**

The following samples were analyzed in this batch:

1312428-01B

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54011** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: MBLK-54011-54011				Units: µg/Kg			Analysis Date: 12/10/2013 02:33 PM			
Client ID:		Run ID: VMS6_131210A		SeqNo: 2573529		Prep Date: 12/3/2013		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	1016	0	1000	0	102	70-130	0			
Surr: 4-Bromofluorobenzene	983	0	1000	0	98.3	70-130	0			
Surr: Dibromofluoromethane	898	0	1000	0	89.8	70-130	0			
Surr: Toluene-d8	1032	0	1000	0	103	70-130	0			

LCS Sample ID: LCS-54011-54011				Units: µg/Kg			Analysis Date: 12/10/2013 12:54 PM			
Client ID:		Run ID: VMS6_131210A		SeqNo: 2573525		Prep Date: 12/3/2013		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	988.5	30	1000	0	98.8	75-125	0			
Ethylbenzene	1036	30	1000	0	104	75-125	0			
m,p-Xylene	2070	60	2000	0	104	80-125	0			
o-Xylene	1038	30	1000	0	104	75-125	0			
Toluene	1013	30	1000	0	101	70-125	0			
Xylenes, Total	3108	90	3000	0	104	75-125	0			
Surr: 1,2-Dichloroethane-d4	997	0	1000	0	99.7	70-130	0			
Surr: 4-Bromofluorobenzene	1022	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	1024	0	1000	0	102	70-130	0			
Surr: Toluene-d8	1040	0	1000	0	104	70-130	0			

MS Sample ID: 1312357-12B MS				Units: µg/Kg			Analysis Date: 12/11/2013 10:25 PM			
Client ID:		Run ID: VMS6_131211A		SeqNo: 2575755		Prep Date: 12/3/2013		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	95700	3,000	100000	0	95.7	75-125	0			
Ethylbenzene	100200	3,000	100000	0	100	75-125	0			
m,p-Xylene	197700	6,000	200000	0	98.8	80-125	0			
o-Xylene	99100	3,000	100000	0	99.1	75-125	0			
Toluene	98050	3,000	100000	0	98	70-125	0			
Xylenes, Total	296800	9,000	300000	0	98.9	75-125	0			
Surr: 1,2-Dichloroethane-d4	101800	0	100000	0	102	70-130	0			
Surr: 4-Bromofluorobenzene	98000	0	100000	0	98	70-130	0			
Surr: Dibromofluoromethane	100900	0	100000	0	101	70-130	0			
Surr: Toluene-d8	103300	0	100000	0	103	70-130	0			

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

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54011** Instrument ID **VMS6** Method: **SW8260B**

MS					Sample ID: 1312438-02A MS			Units: µg/Kg		Analysis Date: 12/11/2013 08:52 PM	
Client ID:			Run ID: VMS8_131211A			SeqNo: 2575831		Prep Date: 12/3/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1603	52	1740	0	92.2	75-125	0				
Ethylbenzene	1684	52	1740	0	96.8	75-125	0				
m,p-Xylene	3276	100	3479	0	94.2	80-125	0				
o-Xylene	1607	52	1740	0	92.4	75-125	0				
Toluene	1603	52	1740	0	92.2	70-125	0				
Xylenes, Total	4883	160	5219	0	93.6	75-125	0				
Surr: 1,2-Dichloroethane-d4	1691	0	1740	0	97.2	70-130	0				
Surr: 4-Bromofluorobenzene	1654	0	1740	0	95.1	70-130	0				
Surr: Dibromofluoromethane	1748	0	1740	0	100	70-130	0				
Surr: Toluene-d8	1688	0	1740	0	97	70-130	0				

MSD					Sample ID: 1312357-12B MSD			Units: µg/Kg		Analysis Date: 12/11/2013 10:50 PM	
Client ID:			Run ID: VMS6_131211A			SeqNo: 2575756		Prep Date: 12/3/2013		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	93100	3,000	100000	0	93.1	75-125	95700	2.75	30		
Ethylbenzene	97000	3,000	100000	0	97	75-125	100200	3.25	30		
m,p-Xylene	192200	6,000	200000	0	96.1	80-125	197700	2.8	30		
o-Xylene	97700	3,000	100000	0	97.7	75-125	99100	1.42	30		
Toluene	94350	3,000	100000	0	94.4	70-125	98050	3.85	30		
Xylenes, Total	290000	9,000	300000	0	96.6	75-125	296800	2.33	30		
Surr: 1,2-Dichloroethane-d4	102700	0	100000	0	103	70-130	101800	0.831	30		
Surr: 4-Bromofluorobenzene	100400	0	100000	0	100	70-130	98000	2.47	30		
Surr: Dibromofluoromethane	102000	0	100000	0	102	70-130	100900	1.13	30		
Surr: Toluene-d8	103300	0	100000	0	103	70-130	103300	0	30		

MSD					Sample ID: 1312438-02A MSD			Units: µg/Kg		Analysis Date: 12/11/2013 09:16 PM	
Client ID:			Run ID: VMS8_131211A			SeqNo: 2575832		Prep Date: 12/3/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1581	52	1740	0	90.8	75-125	1603	1.42	30		
Ethylbenzene	1660	52	1740	0	95.4	75-125	1684	1.46	30		
m,p-Xylene	3238	100	3479	0	93	80-125	3276	1.18	30		
o-Xylene	1611	52	1740	0	92.6	75-125	1607	0.27	30		
Toluene	1567	52	1740	0	90	70-125	1603	2.31	30		
Xylenes, Total	4849	160	5219	0	92.9	75-125	4883	0.697	30		
Surr: 1,2-Dichloroethane-d4	1707	0	1740	0	98.1	70-130	1691	0.922	30		
Surr: 4-Bromofluorobenzene	1653	0	1740	0	95	70-130	1654	0.105	30		
Surr: Dibromofluoromethane	1764	0	1740	0	101	70-130	1748	0.892	30		
Surr: Toluene-d8	1669	0	1740	0	96	70-130	1688	1.09	30		

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54011** Instrument ID **VMS6** Method: **SW8260B**

The following samples were analyzed in this batch:

1312428-01A

Client: HRL Compliance Solutions
 Work Order: 1312428
 Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54021** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-54021-54021				Units: mg/Kg		Analysis Date: 12/10/2013 09:45 AM		
Client ID:		Run ID: WETCHEM_131210C				SeqNo: 2571855		Prep Date: 12/10/2013		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-54021-54021				Units: mg/Kg		Analysis Date: 12/10/2013 09:45 AM		
Client ID:		Run ID: WETCHEM_131210C				SeqNo: 2571854		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.876 0.50 2 0 93.8 80-120 0

MS		Sample ID: 1312263-01A MS				Units: mg/Kg		Analysis Date: 12/10/2013 09:45 AM		
Client ID:		Run ID: WETCHEM_131210C				SeqNo: 2571841		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.4627 0.49 1.961 0.004082 23.4 75-125 0 JS

MS		Sample ID: 1312263-01A MSI				Units: mg/Kg		Analysis Date: 12/10/2013 09:45 AM		
Client ID:		Run ID: WETCHEM_131210C				SeqNo: 2571843		Prep Date: 12/10/2013		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 601.6 49 1285 0.004082 46.8 75-125 0 S

MSD		Sample ID: 1312263-01A MSD				Units: mg/Kg		Analysis Date: 12/10/2013 09:45 AM		
Client ID:		Run ID: WETCHEM_131210C				SeqNo: 2571842		Prep Date: 12/10/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.371 0.50 2.016 0.004082 18.2 75-125 0.4627 0 20 JS

The following samples were analyzed in this batch:

1312428-01B

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54050** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-54050-54050				Units: s.u.			Analysis Date: 12/10/2013 04:00 PM			
Client ID:				Run ID: WETCHEM_131210R				SeqNo: 2573131			Prep Date: 12/10/2013		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		3.93	0	4	0	98.2	90-110	0						

DUP		Sample ID: 1312357-12A DUP					Units: s.u.		Analysis Date: 12/10/2013 04:00 PM		
Client ID:			Run ID: WETCHEM_131210R			SeqNo: 2573136		Prep Date: 12/10/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	3.3	0	0	0	0	0-0	3.57	7.86	20		

The following samples were analyzed in this batch:

1312428-01B

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **54096** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1312393-03C DUP				Units: mmhos/cm @25°C		Analysis Date: 12/12/2013 03:20 PM		
Client ID:		Run ID: WETCHEM_131212K				SeqNo: 2576592		Prep Date: 12/12/2013		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.84	0.050	0	0	0		0.814	3.14	50	

The following samples were analyzed in this batch:

1312428-01C

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

Client: HRL Compliance Solutions
Work Order: 1312428
Project: WPX RGU 23-23-198 12.5.13

QC BATCH REPORT

Batch ID: **R132271** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R132271				Units: % of sample		Analysis Date: 12/11/2013 02:40 PM		
Client ID:		Run ID: MOIST_131211C				SeqNo: 2575616		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-R132271				Units: % of sample		Analysis Date: 12/11/2013 02:40 PM		
Client ID:		Run ID: MOIST_131211C				SeqNo: 2575612		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.99 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1312526-01B DUP				Units: % of sample		Analysis Date: 12/11/2013 02:40 PM		
Client ID:		Run ID: MOIST_131211C				SeqNo: 2575608		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 4.32 0.050 0 0 0 0-0 4.25 1.63 20

DUP		Sample ID: 1312526-02B DUP				Units: % of sample		Analysis Date: 12/11/2013 02:40 PM		
Client ID:		Run ID: MOIST_131211C				SeqNo: 2575610		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 3.54 0.050 0 0 0 0-0 3.55 0.282 20

The following samples were analyzed in this batch:

1312428-01A	1312428-02A	1312428-03A
1312428-04A	1312428-05A	1312428-06A

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



ALS Laboratory Group

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Chain-of-Custody

Form 202r8

WORKORDER #

1312428

PROJECT-NAME	WPX <i>RGU23-23-198-Pit</i>	SAMPLER	Reed Wold					DATE	<i>12/6/13</i>					PAGE	1 of 1										
PROJECT No.	<i>closure</i>	SITE ID	<i>RGU23-23-198</i>					TURNAROUND	<i>5 day</i>					DISPOSAL	By Lab or Return to Client										
COMPANY NAME	HRL Compliance	EDD FORMAT						<i>BTX/hQo</i> <i>DRIPAH/Metals</i> <i>SAR/ELPH</i> <i>Ascorbic</i>																	
SEND REPORT TO	Mark Mumby	PURCHASE ORDER																							
ADDRESS	2385 F 1/2 Rd	BILL TO COMPANY	WPX																						
CITY / STATE / ZIP	Grand Junction, CO 81506	INVOICE ATTN TO	Karolina Blaney																						
PHONE	970-243-3271	ADDRESS	1058 Co Rd 215																						
FAX	970-243-3280	CITY / STATE / ZIP	Parachure CO 81635																						
E-MAIL	<i>mmumby@hrlcomp.com</i> <i>rwold@hrlcomp.com</i>	PHONE	970-683-2295																						
		FAX																							
		E-MAIL	<i>Karolina.blaney@wpenergy.com</i>																						
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC																		
	<i>Pit</i>	<i>SO</i>	<i>12/5/13</i>	<i>10:45</i>	<i>3</i>	<i>8</i>		<i>x</i>	<i>x</i>	<i>x</i>															
	<i>RGU23-23-198-B-1</i>	<i>↓</i>		<i>11:30</i>	<i>1</i>	<i>8</i>					<i>x</i>														
	<i>RGU23-23-198-B-2</i>			<i>11:35</i>	<i>1</i>	<i>8</i>					<i>x</i>														
	<i>RGU23-23-198-B-3</i>			<i>11:40</i>	<i>1</i>	<i>8</i>					<i>x</i>														
	<i>RGU23-23-198-B-4</i>			<i>11:45</i>	<i>1</i>	<i>8</i>					<i>x</i>														
	<i>RGU23-23-198-B-5</i>			<i>11:50</i>	<i>1</i>	<i>8</i>					<i>x</i>														

*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:	<i>5.201</i> <i>LAX</i>	QC PACKAGE (check below)
		<input checked="" type="checkbox"/> LEVEL II (Standard QC)
		<input type="checkbox"/> LEVEL III (Std QC + forms)
		<input type="checkbox"/> 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
<i>Reed Wold</i>	<i>Reed Wold</i>	<i>12/6/13</i>	<i>8:00</i>
<i>[Signature]</i>	<i>[Signature]</i>	<i>12-5</i>	<i>3:00</i>
<i>[Signature]</i>	<i>[Signature]</i>	<i>12-5</i>	<i>3:05</i>
<i>[Signature]</i>			
<i>[Signature]</i>			
<i>[Signature]</i>		<i>12/6/13</i>	<i>0930</i>



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

PROJECT NAME		WPX <i>RGU23-23-198?it</i>		SAMPLER		Reed Wold		DATE		12/5/13		WORKORDER #		PAGE		1 of 1			
PROJECT No.		<i>closure</i>		SITE ID		<i>RGU23-23-198</i>		TURNAROUND		<i>5 day</i>		DISPOSAL		By Lab		or Return to Client			
COMPANY NAME		HRL Compliance		PURCHASE ORDER				<i>BTX/HQO</i> <i>DRIP/H/Metals</i> <i>SAR/EC/PH</i> <i>Arsenic</i>											
SEND REPORT TO		Mark Mumby		BILL TO COMPANY		WPX													
ADDRESS		2385 F 1/2 Rd		INVOICE ATTN TO		Karolina Blaney													
CITY/STATE/ZIP		Grand Junction, CO 81506		ADDRESS		1058 Co Rd 215													
PHONE		970-243-3271		CITY/STATE/ZIP		Parachure CO 81635													
FAX		970-243-3280		PHONE		970-683-2295													
E-MAIL		<i>mmumby@hrlcomp.com</i> <i>rwold@hrlcomp.com</i>		E-MAIL		<i>Karolina.blaney@wpenergy.com</i>													
Lab ID		Field ID		Matrix		Sample Date		Sample Time		# Bottles		Pres.		QC					
		<i>Pit</i>		<i>Soil</i>		<i>11:30</i>		<i>11:35</i>		<i>1</i>		<i>8</i>							
		<i>RGU23-23-198-B-1</i>				<i>11:30</i>		<i>1</i>		<i>8</i>									
		<i>RGU23-23-198-B-2</i>				<i>11:35</i>		<i>1</i>		<i>8</i>									
		<i>RGU23-23-198-B-3</i>				<i>11:40</i>		<i>1</i>		<i>8</i>									
		<i>RGU23-23-198-B-4</i>				<i>11:45</i>		<i>1</i>		<i>8</i>									
		<i>RGU23-23-198-B-5</i>				<i>11:50</i>		<i>1</i>		<i>8</i>									

*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: <i>These Backgrounds were not sent with the other sample from Labhub.</i>	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>	

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 <i>Reed Wold</i>		<i>Reed Wold</i>		<i>12/5/13</i>		<i>9:00</i>	
RECEIVED BY <i>[Signature]</i>		<i>[Signature]</i>		<i>12-5</i>		<i>3:00</i>	
RELINQUISHED BY							
RECEIVED BY							

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **09-Dec-13 09:30**

Work Order: **1312428**

Received by: **AB**

Checklist completed by Ashley Beard
eSignature

09-Dec-13
Date

Reviewed by: Lee Arnold
eSignature

10-Dec-13
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

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 12/9/2013 12:09:56 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:

FedEx

NEW Package

Express

FedEx
Tracking
Number

8022 0273 1402

02

1 From

Date

Sender's
Name

Company

Address

City

State

ZIP

2 Your Internal Billing Reference

3 To

Recipient's
Name

Company

Address

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

State

ZIP

Phone

Phone

Dept./Floor/Suite/Room

Dept./Floor/Suite/Room

HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.

4 Express Pack

NOTE: Service order

Next Business

☐ FedEx First Over
Earliest next business
location. Friday ship
Monday unless SATU☐ FedEx Priority C
Next business mornin
delivered on Monday,
if selected.☐ FedEx Standar
Next business aftern.
Saturday Delivery NO

5 Packaging

☐ FedEx Envelop

6 Special Ha

☐ SATURDAY D
NOT available for F☐ Signature
Package may be left
obtaining a signature

Does this ship

☐ No ☐ Yes
On
At
SIDangerous goods (include
or placed in a FedEx Expre

7 Payment

☐ Sender
Acct. No. in Section
I will be billed.

Total Packages

Our liability is limited to U

Rev. Date 1/12 • Part #1

ORIGIN ID:GJTA

UNITED STATES US

SAMPLE RECEIVING
ALS LAB GROUP
3352 128TH AVE

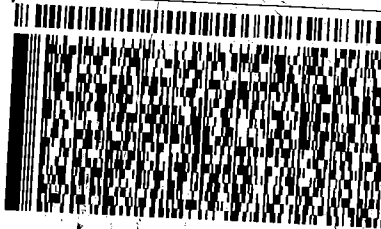
HOLLAND MI 49424

(616) 399-6070

YNU:
PO:

REF:

DEPT:

SHIP DATE: 05DEC13
ACTWGT: 12.0 LB
CAD: /POS1424
DIMS: 25x14x14 IN
BILL RECIPIENTFedEx
Express

TRK# 8022 0273 1402



8022 0273 1402

Part # 156297-435 R1120913 • SU/C1 3100000

CUSTOM SEAL **QEC**
Quality Environmental Containers
800-255-3950 3950-255-3900

DATE 11/1/00

SIGNATURE [Signature]

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

Origin ID: RILA



Ship Date: 05DEC13
ActWgt: 50.0 LB
CAD: 103923490/NET3438
Dims: 25 X 14 X 15 IN

Delivery Address Bar Code



SHIP TO: (616) 399-6678
Sample receiving
ALS Holland
3352 128TH AVE

BILL RECIPIENT

HOLLAND, MI 49424

Ref # 1001-120513-3
Invoice #
PO #
Dept #

FRI - 06 DEC AA
STANDARD OVERNIGHT

TRK# 7973 2718 9416
0201

49424
MI-US
GRR

XX GRRA



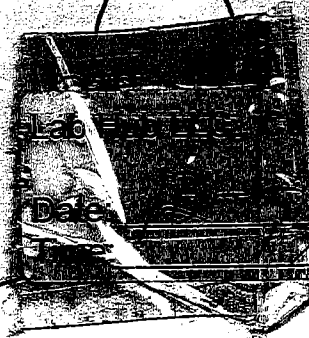
51AG49905/046

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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.





11-Apr-2014

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

Re: **WPX RG 23-23-198 Cuttings 4.9.14**

Work Order: **1404497**

Dear Mark,

ALS Environmental received 1 sample 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 11.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX RG 23-23-198 Cuttings 4.9.14
Work Order: 1404497

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1404497-01	Cuttings	Soil		4/9/2014 10:00	4/10/2014 09:30	<input type="checkbox"/>

ALS Group USA, Corp

Date: 11-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX RG 23-23-198 Cuttings 4.9.14
Work Order: 1404497

Case Narrative

Batch 57424 sample 1404497-01 DRO surrogate recovery was high due to matrix interference. No data requires qualification. The MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions, Inc
Project: WPX RG 23-23-198 Cuttings 4.9.14
WorkOrder: 1404497

QUALIFIERS, ACRONYMS, UNITS

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

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

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

ALS Group USA, Corp

Date: 11-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX RG 23-23-198 Cuttings 4.9.14
Sample ID: Cuttings
Collection Date: 4/9/2014 10:00 AM

Work Order: 1404497
Lab ID: 1404497-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	450		SW8015M		Prep: SW3541 / 4/10/14	Analyst: IT
			5.3	mg/Kg-dry	1	4/10/2014 10:14 PM
Surr: 4-Terphenyl-d14	225	S	39-115	%REC	1	4/10/2014 10:14 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 4/10/14	Analyst: IT
			3.2	mg/Kg-dry	1	4/10/2014 06:41 PM
Surr: Toluene-d8	118		50-150	%REC	1	4/10/2014 06:41 PM
MOISTURE						
Moisture	22		A2540 G			Analyst: AT
			0.050	% of sample	1	4/10/2014 11:00 AM

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404497
Project: WPX RG 23-23-198 Cuttings 4.9.14

QC BATCH REPORT

Batch ID: **57424** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-57424-57424					Units: mg/Kg		Analysis Date: 4/10/2014 05:45 PM		
Client ID:			Run ID: GC8_140410A			SeqNo: 2707114		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	
DRO (C10-C28)	ND	4.2									
Surr: 4-Terphenyl-d14	1.198	0	1.667	0	71.9	39-115	0				

LCS		Sample ID: DLCSS1-57424-57424				Units: mg/Kg		Analysis Date: 4/10/2014 06:15 PM		
Client ID:		Run ID: GC8_140410A			SeqNo: 2707115		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
DRO (C10-C28)	158.9	4.2	166.7	0	95.3	49-124	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.248</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>74.9</i>	<i>39-115</i>	<i>0</i>			

MS		Sample ID: 1404492-05B MS				Units: mg/Kg		Analysis Date: 4/10/2014 06:45 PM		
Client ID:			Run ID: GC8_140410A			SeqNo: 2707116		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
DRO (C10-C28)	545.5	8.2	652.9	0	83.5	49-130	0			
Surr: 4-Terphenyl-d14	2.048	0	3.265	0	62.7	39-115	0			

MSD				Sample ID: 1404492-05B MSD				Units: mg/Kg			Analysis Date: 4/10/2014 07:15 PM			
Client ID:				Run ID: GC8_140410A				SeqNo: 2707117			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			
DRO (C10-C28)		276.6	7.9	315.8	0	87.6	49-130	545.5	65.4	30	R			
Surr: 4-Terphenyl-d14		1.977	0	3.158	0	62.6	39-115	2.048	3.49	30				

The following samples were analyzed in this batch: 1404497-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1404497
Project: WPX RG 23-23-198 Cuttings 4.9.14

QC BATCH REPORT

Batch ID: **57427** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-57427-57427				Units: µg/Kg		Analysis Date: 4/10/2014 03:10 PM		
Client ID:		Run ID: GC9_140410A				SeqNo: 2707157		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
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5768	0	5000	0	115	50-150	0			

LCS		Sample ID: LCS-57427-57427				Units: µg/Kg		Analysis Date: 4/10/2014 01:53 PM		
Client ID:		Run ID: GC9_140410A				SeqNo: 2707156		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
GRO (C6-C10)	613900	2,500	500000	0	123	70-130	0			
<i>Surr: Toluene-d8</i>	4677	0	5000	0	93.5	50-150	0			

MS		Sample ID: 1404492-01A MS				Units: µg/Kg		Analysis Date: 4/10/2014 07:34 PM		
Client ID:		Run ID: GC9_140410A				SeqNo: 2707167		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
GRO (C6-C10)	462300	2,500	500000	0	92.5	70-130	0			
<i>Surr: Toluene-d8</i>	4262	0	5000	0	85.2	50-150	0			

MSD		Sample ID: 1404492-01A MSD				Units: µg/Kg		Analysis Date: 4/10/2014 08:00 PM		
Client ID:		Run ID: GC9_140410A				SeqNo: 2707168		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
GRO (C6-C10)	480600	2,500	500000	0	96.1	70-130	462300	3.89	30	
<i>Surr: Toluene-d8</i>	4306	0	5000	0	86.1	50-150	4262	1.03	30	

The following samples were analyzed in this batch:

1404497-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404497
Project: WPX RG 23-23-198 Cuttings 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:

1404497-01A

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



ALS Laboratory Group

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

Chain-of-Custody

Form 202r6

WORKORDER #

1404497

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

WPX *RL 23-23-198*

SAMPLER

Reed Wold

SITE ID

RL 23-23-198

DATE

4/9/14

TURNAROUND

24hr

PROJECT No.

Cuttings

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

Parachute CO 81635

PHONE

970-243-3271

PHONE

970-883-2295

FAX

970-243-3280

FAX

E-MAIL

mmumby@hrlcomp.com
rwold@hrlcomp.com

E-MAIL

Karolina.blaney@wpenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

1

Cuttings

So

4/9/14

10:00

1


8

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% 

QC PACKAGE (check below)

☒ LEVEL II (Standard QC)
☐ LEVEL III (Std QC + forms)
☐ LEVEL IV (Std QC + forms + raw data)

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

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

Reed Wold

Reed Wold

4/9/14

2:45

RECEIVED BY

N. Martinez

N. Martinez

4-9-14

2:45

RELINQUISHED BY

D. Martinez

N. Martinez

4-9-14

2:45

RECEIVED BY

Diane F. Smith

Diane F. Smith

4/10/14

0930

RELINQUISHED BY

RECEIVED BY

Sample Receipt Checklist

Client Name: **HRL**

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

Work Order: **1404497**

Received by: **DS**

Checklist completed by Diane Shaw 10-Apr-14
eSignature Date

Reviewed by: Ann Preston 10-Apr-14
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/10/2014 11:00:55 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ALS Parachute Custody Seal

Date: 4-9-14 Time: 630

Name: W. Michael



16-Apr-2014

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

Re: **WPX RGU 23-23-198 Backgrounds 4.9.14**

Work Order: **1404511**

Dear Mark,

ALS Environmental received 5 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 13.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX RGU 23-23-198 Backgrounds 4.9.14
Work Order: 1404511

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1404511-01	RGU 23-23-198-B-6	Soil		4/9/2014 10:20	4/10/2014 09:30	<input type="checkbox"/>
1404511-02	RGU 23-23-198-B-7	Soil		4/9/2014 10:25	4/10/2014 09:30	<input type="checkbox"/>
1404511-03	RGU 23-23-198-B-8	Soil		4/9/2014 10:30	4/10/2014 09:30	<input type="checkbox"/>
1404511-04	RGU 23-23-198-B-9	Soil		4/9/2014 10:35	4/10/2014 09:30	<input type="checkbox"/>
1404511-05	RGU 23-23-198-B-10	Soil		4/9/2014 10:40	4/10/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX RGU 23-23-198 Backgrounds 4.9.14
WorkOrder: 1404511

QUALIFIERS, ACRONYMS, UNITS

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

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

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

ALS Group USA, Corp

Date: 16-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX RGU 23-23-198 Backgrounds 4.9.14
Sample ID: RGU 23-23-198-B-6
Collection Date: 4/9/2014 10:20 AM

Work Order: 1404511
Lab ID: 1404511-01
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	3.2		2.2	mg/Kg-dry	5	4/14/2014 12:48 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	4.5		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 RGU 23-23-198 Backgrounds 4.9.14
Sample ID: RGU 23-23-198-B-7
Collection Date: 4/9/2014 10:25 AM

Work Order: 1404511
Lab ID: 1404511-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 4/12/14	Analyst: RH
Arsenic	2.3		1.8	mg/Kg-dry	5	4/14/2014 12:54 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	2.1		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 RGU 23-23-198 Backgrounds 4.9.14
Sample ID: RGU 23-23-198-B-8
Collection Date: 4/9/2014 10:30 AM

Work Order: 1404511
Lab ID: 1404511-03
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	3.4		1.7	mg/Kg-dry	5	4/14/2014 01:00 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	3.6		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 RGU 23-23-198 Backgrounds 4.9.14
Sample ID: RGU 23-23-198-B-9
Collection Date: 4/9/2014 10:35 AM

Work Order: 1404511
Lab ID: 1404511-04
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	3.2		2.0	mg/Kg-dry	5	4/14/2014 01:05 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	3.6		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 RGU 23-23-198 Backgrounds 4.9.14
Sample ID: RGU 23-23-198-B-10
Collection Date: 4/9/2014 10:40 AM

Work Order: 1404511
Lab ID: 1404511-05
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		2.0	mg/Kg-dry	5	4/14/2014 01:11 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	3.7		0.050	% of sample	1	4/10/2014 11:00 AM

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404511
Project: WPX RGU 23-23-198 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:	1404511-01A	1404511-02A	1404511-03A
	1404511-04A	1404511-05A	

Client: HRL Compliance Solutions, Inc
Work Order: 1404511
Project: WPX RGU 23-23-198 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:

1404511-01A	1404511-02A	1404511-03A
1404511-04A	1404511-05A	

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 282r8

WORKORDER #

1404511

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME WPX *R64 23-23-198*

SAMPLER Reed Wold

DATE

4/9/14

SITE ID

R64 23-23-198

TURNAROUND

Standard

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 81508

CITY / STATE / ZIP

Parachute CO 81635

PHONE

970-243-3271

PHONE

970-683-2285

FAX

970-243-3280

FAX

E-MAIL

*mmumby@hrlcomp.com
rwold@hrlcomp.com*

E-MAIL

Karolina.blaney@wpenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

1

R64 23-23-198-B-6

So

4/9/14

10:20

1

8

X

2

R64 23-23-198-B-7

↓

↓

10:25

1

↓

X

3

R64 23-23-198-B-8

↓

↓

10:30

1

↓

X

4

R64 23-23-198-B-9

↓

↓

10:35

1

↓

X

5

R64 23-23-198-B-10

↓

↓

10:40

1

↓

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)

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

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

Diane E. Shaw

Diane E. Shaw

4/10/14 0930

RELINQUISHED BY

RECEIVED BY

Sample Receipt Checklist

Client Name: **HRL**

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

Work Order: **1404511**

Received by: **DS**

Checklist completed by Diane Shaw 10-Apr-14
eSignature Date

Reviewed by: Ann Preston 10-Apr-14
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/10/2014 11:31:33 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

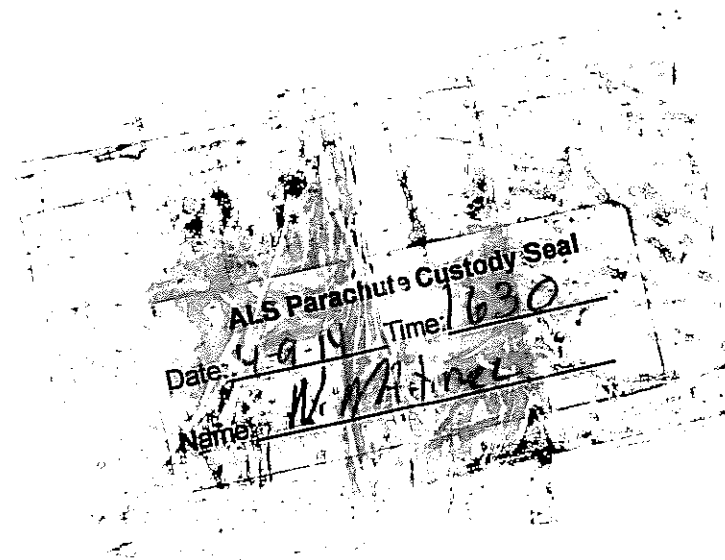
Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ALS Parachute Custody Seal

Date: 4-9-14 Time: 1630

Name: W. Michael