

Legend

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

KP 32-9
Arsenic Background Sample Location Map
T6S R91W, Section 9

September 24, 2014





03-Sep-2014

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

Re: **WPX KR 32-9 Cuttings 8.26.14**

Work Order: **14081390**

Dear Mark,

ALS Environmental received 1 sample on 27-Aug-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 24.

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

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Environmental ALS Environmental logo icon consisting of a stylized green and blue shape.

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Client: HRL Compliance Solutions, Inc
Project: WPX KR 32-9 Cuttings 8.26.14
Work Order: 14081390

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>
14081390-01	Cuttings	Soil		8/26/2014 09:30	8/27/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX KR 32-9 Cuttings 8.26.14
Work Order: 14081390

Case Narrative

Batch 62193 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 62206 sample 14081390-01 DRO surrogate recovery was high due to matrix interference. No data requires qualification.

Batch 62130 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

<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
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: 03-Sep-14

Client: HRL Compliance Solutions, Inc

Project: WPX KR 32-9 Cuttings 8.26.14

Work Order: 14081390

Sample ID: Cuttings

Lab ID: 14081390-01

Collection Date: 8/26/2014 09:30 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	110		SW8015M		Prep: SW3541 / 8/29/14	Analyst: IT
Surr: 4-Terphenyl-d14	229	S	5.0	mg/Kg-dry	1	9/2/2014 07:06 PM
			39-133	%REC	1	9/2/2014 07:06 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 8/27/14	Analyst: IT
Surr: Toluene-d8	124		3.1	mg/Kg-dry	1	8/27/2014 11:52 PM
			50-150	%REC	1	8/27/2014 11:52 PM
MERCURY BY CVA						
Mercury	0.043		SW7471		Prep: SW7471 / 8/27/14	Analyst: LR
			0.017	mg/Kg-dry	1	8/28/2014 01:28 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 8/29/14	Analyst: JEJ
Calcium	220		5.0	mg/L	10	8/29/2014 04:00 PM
Magnesium	0.29		0.20	mg/L	1	8/29/2014 04:30 PM
Sodium	1,500		2.0	mg/L	10	8/29/2014 04:00 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	4.7		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Barium	7,300		22	mg/Kg-dry	50	8/28/2014 12:37 PM
Cadmium	ND		0.87	mg/Kg-dry	5	8/28/2014 12:18 AM
Chromium	11		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Copper	19		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Lead	11		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Nickel	9.0		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Selenium	ND		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Silver	ND		2.2	mg/Kg-dry	5	8/28/2014 12:18 AM
Zinc	42		4.3	mg/Kg-dry	5	8/28/2014 12:18 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 8/29/14	Analyst: JEJ
Sodium Adsorption Ratio	28		0.010	none	1	8/29/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 8/27/14	Analyst: MK
Acenaphthene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Acenaphthylene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Anthracene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Benzo(a)anthracene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Benzo(a)pyrene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Benzo(b)fluoranthene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Benzo(g,h,i)perylene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Benzo(k)fluoranthene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Chrysene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM

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

ALS Group USA, Corp

Date: 03-Sep-14

Client: HRL Compliance Solutions, Inc

Project: WPX KR 32-9 Cuttings 8.26.14

Work Order: 14081390

Sample ID: Cuttings

Lab ID: 14081390-01

Collection Date: 8/26/2014 09:30 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Fluoranthene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Fluorene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Indeno(1,2,3-cd)pyrene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Naphthalene	51		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Pyrene	ND		8.1	µg/Kg-dry	1	8/28/2014 01:37 PM
Surr: 2-Fluorobiphenyl	60.9		12-100	%REC	1	8/28/2014 01:37 PM
Surr: 4-Terphenyl-d14	107		25-137	%REC	1	8/28/2014 01:37 PM
Surr: Nitrobenzene-d5	48.1		37-107	%REC	1	8/28/2014 01:37 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 8/27/14		Analyst: RS
Benzene	150		37	µg/Kg-dry	1	8/27/2014 10:44 PM
Ethylbenzene	81		37	µg/Kg-dry	1	8/27/2014 10:44 PM
m,p-Xylene	930		74	µg/Kg-dry	1	8/27/2014 10:44 PM
o-Xylene	210		37	µg/Kg-dry	1	8/27/2014 10:44 PM
Toluene	860		37	µg/Kg-dry	1	8/27/2014 10:44 PM
Xylenes, Total	1,100		110	µg/Kg-dry	1	8/27/2014 10:44 PM
Surr: 1,2-Dichloroethane-d4	97.1		70-130	%REC	1	8/27/2014 10:44 PM
Surr: 4-Bromofluorobenzene	102		70-130	%REC	1	8/27/2014 10:44 PM
Surr: Dibromofluoromethane	97.4		70-130	%REC	1	8/27/2014 10:44 PM
Surr: Toluene-d8	97.6		70-130	%REC	1	8/27/2014 10:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 8/29/14		Analyst: MELB
Electrical Conductivity @ Saturation	9.1		0.050	mmhos/cm @25	10	8/29/2014 04:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	11		0.61	mg/Kg-dry	1	8/29/2014 04:54 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 8/27/14		Analyst: MB
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	8/28/2014 04:00 PM
MOISTURE			A2540 G			Analyst: RDM
Moisture	19		0.050	% of sample	1	8/27/2014 12:30 PM
PH			SW9045D	Prep: EXTRACT / 8/28/14		Analyst: STP
pH	9.8			s.u.	1	8/28/2014 02:00 PM

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62206** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-62206-62206				Units: mg/Kg		Analysis Date: 8/29/2014 06:03 PM			
Client ID:		Run ID: GC8_140829A				SeqNo: 2913138		Prep Date: 8/29/2014		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									
<i>Surr: 4-Terphenyl-d14</i>	1.07	0	1.667	0	64.2	39-133	0				

LCS		Sample ID: DLCSS1-62206-62206				Units: mg/Kg		Analysis Date: 8/29/2014 06:33 PM			
Client ID:		Run ID: GC8_140829A				SeqNo: 2913139		Prep Date: 8/29/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	134.1	4.2	166.7	0	80.5	61-109	0				
<i>Surr: 4-Terphenyl-d14</i>	1.156	0	1.667	0	69.4	39-133	0				

MS		Sample ID: 14081488-01B MS				Units: mg/Kg		Analysis Date: 8/29/2014 07:03 PM			
Client ID:		Run ID: GC8_140829A				SeqNo: 2913140		Prep Date: 8/29/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	276.2	8.2	329.5	34.68	73.3	48-110	0				
<i>Surr: 4-Terphenyl-d14</i>	2.298	0	3.295	0	69.7	39-133	0				

MSD		Sample ID: 14081488-01B MSD				Units: mg/Kg		Analysis Date: 8/29/2014 07:33 PM			
Client ID:		Run ID: GC8_140829A				SeqNo: 2913141		Prep Date: 8/29/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	272.9	8.0	320.7	34.68	74.3	48-110	276.2	1.19	30		
<i>Surr: 4-Terphenyl-d14</i>	2.32	0	3.207	0	72.3	39-133	2.298	0.956	30		

The following samples were analyzed in this batch: | 14081390-01B |

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62132** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-62132-62132				Units: µg/Kg		Analysis Date: 8/27/2014 09:46 PM			
Client ID:		Run ID: GC9_140827B				SeqNo: 2907814		Prep Date: 8/27/2014		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>	5028	0	5000	0	101	50-150	0				

LCS		Sample ID: LCS-62132-62132				Units: µg/Kg		Analysis Date: 8/27/2014 09:21 PM			
Client ID:		Run ID: GC9_140827B				SeqNo: 2907813		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	518300	2,500	500000	0	104	70-130	0				
<i>Surr: Toluene-d8</i>	5566	0	5000	0	111	50-150	0				

MS		Sample ID: 14081391-05A MS				Units: µg/Kg		Analysis Date: 8/28/2014 02:48 AM			
Client ID:		Run ID: GC9_140827B				SeqNo: 2907823		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	478100	2,500	500000	0	95.6	70-130	0				
<i>Surr: Toluene-d8</i>	5614	0	5000	0	112	50-150	0				

MSD		Sample ID: 14081391-05A MSD				Units: µg/Kg		Analysis Date: 8/28/2014 03:13 AM			
Client ID:		Run ID: GC9_140827B				SeqNo: 2907824		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	478400	2,500	500000	0	95.7	70-130	478100	0.0757	30		
<i>Surr: Toluene-d8</i>	5811	0	5000	0	116	50-150	5614	3.46	30		

The following samples were analyzed in this batch: 14081390-01A

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62130** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-62130-62130				Units: mg/Kg		Analysis Date: 8/27/2014 10:21 PM		
Client ID:		Run ID: ICPMS1_140827A		SeqNo: 2907579		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04416	0.25								J
Barium	0.00955	0.25								J
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	0.1506	0.50								J

LCS		Sample ID: LCS-62130-62130				Units: mg/Kg		Analysis Date: 8/27/2014 10:27 PM		
Client ID:		Run ID: ICPMS1_140827A		SeqNo: 2907580		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.45	0.25	5	0	89	80-120	0			
Barium	4.618	0.25	5	0	92.4	80-120	0			
Cadmium	4.591	0.10	5	0	91.8	80-120	0			
Chromium	4.506	0.25	5	0	90.1	80-120	0			
Copper	4.505	0.25	5	0	90.1	80-120	0			
Lead	4.462	0.25	5	0	89.2	80-120	0			
Nickel	4.384	0.25	5	0	87.7	80-120	0			
Selenium	4.28	0.25	5	0	85.6	80-120	0			
Silver	4.378	0.25	5	0	87.6	80-120	0			
Zinc	4.536	0.50	5	0	90.7	80-120	0			

MS		Sample ID: 14081393-02AMS				Units: mg/Kg		Analysis Date: 8/28/2014 12:36 AM		
Client ID:		Run ID: ICPMS1_140827A		SeqNo: 2907601		Prep Date: 8/27/2014		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.227	1.8	7.153	2.822	89.5	75-125	0			
Barium	140.2	1.8	7.153	131.7	119	75-125	0			O
Cadmium	7.078	0.72	7.153	0.3342	94.3	75-125	0			
Chromium	18.28	1.8	7.153	8.778	133	75-125	0			S
Copper	17.78	1.8	7.153	9.26	119	75-125	0			
Lead	18.87	1.8	7.153	12.32	91.6	75-125	0			
Nickel	20.26	1.8	7.153	9.256	154	75-125	0			S
Selenium	7.493	1.8	7.153	1.939	77.6	75-125	0			
Silver	6.105	1.8	7.153	0.02237	85	75-125	0			
Zinc	48.64	3.6	7.153	37.68	153	75-125	0			SO

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62130** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 14081393-02AMSD				Units: mg/Kg		Analysis Date: 8/28/2014 01:07 AM			
Client ID:		Run ID: ICPMS1_140827A			SeqNo: 2907604		Prep Date: 8/27/2014		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	9.122	1.8	7.082	2.822	89	75-125	9.227	1.15	25		
Barium	138.1	1.8	7.082	131.7	90.5	75-125	140.2	1.51	25	O	
Cadmium	7.079	0.71	7.082	0.3342	95.2	75-125	7.078	0.00909	25		
Chromium	17.73	1.8	7.082	8.778	126	75-125	18.28	3.07	25	S	
Copper	16.12	1.8	7.082	9.26	96.8	75-125	17.78	9.82	25		
Lead	19.37	1.8	7.082	12.32	99.6	75-125	18.87	2.63	25		
Nickel	15.41	1.8	7.082	9.256	87	75-125	20.26	27.2	25	R	
Selenium	7.592	1.8	7.082	1.939	79.8	75-125	7.493	1.32	25		
Silver	6.19	1.8	7.082	0.02237	87.1	75-125	6.105	1.38	25		
Zinc	48.69	3.5	7.082	37.68	156	75-125	48.64	0.1	25	SO	

The following samples were analyzed in this batch: | 14081390-01B |

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62162** Instrument ID **SAR** Method: **USDA H60 Method**

DUP	Sample ID: 14081398-03BDUP		Units: none		Analysis Date: 8/29/2014					
Client ID:	Run ID: SAR_140829A		SeqNo: 2911077		Prep Date: 8/29/2014		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.07454	0.010	0	0	0			0		

The following samples were analyzed in this batch:

14081390-01C

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62099** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-62099-62099				Units: µg/Kg		Analysis Date: 8/29/2014 04:02 AM		
Client ID:		Run ID: SVMS4_140828A				SeqNo: 2910193		Prep Date: 8/27/2014		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								
<i>Surr: 2-Fluorobiphenyl</i>	1436	0	1667	0	86.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1740	0	1667	0	104	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1163	0	1667	0	69.8	37-107	0			

LCS		Sample ID: SLCSS1-62099-62099				Units: µg/Kg		Analysis Date: 8/29/2014 04:26 AM		
Client ID:		Run ID: SVMS4_140828A				SeqNo: 2910194		Prep Date: 8/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	483.3	6.7	666.7	0	72.5	45-110	0			
Acenaphthylene	517.3	6.7	666.7	0	77.6	45-105	0			
Anthracene	612	6.7	666.7	0	91.8	55-105	0			
Benzo(a)anthracene	578	6.7	666.7	0	86.7	50-110	0			
Benzo(a)pyrene	599.3	6.7	666.7	0	89.9	50-110	0			
Benzo(b)fluoranthene	546.3	6.7	666.7	0	81.9	45-115	0			
Benzo(g,h,i)perylene	624.7	6.7	666.7	0	93.7	40-125	0			
Benzo(k)fluoranthene	622.3	6.7	666.7	0	93.3	45-115	0			
Chrysene	607.3	6.7	666.7	0	91.1	55-110	0			
Dibenzo(a,h)anthracene	580.3	6.7	666.7	0	87	40-125	0			
Fluoranthene	563.7	6.7	666.7	0	84.5	55-115	0			
Fluorene	569.7	6.7	666.7	0	85.4	50-110	0			
Indeno(1,2,3-cd)pyrene	579	6.7	666.7	0	86.8	40-120	0			
Naphthalene	496	6.7	666.7	0	74.4	40-105	0			
Pyrene	652	6.7	666.7	0	97.8	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1253	0	1667	0	75.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1571	0	1667	0	94.3	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1076	0	1667	0	64.6	37-107	0			

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: 62099 Instrument ID SVMS4 Method: SW846 8270D

MS				Sample ID: 14081279-03C MS			Units: µg/Kg		Analysis Date: 8/29/2014 04:49 AM		
Client ID:		Run ID: SVMS4_140828A			SeqNo: 2910195		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1002	13	1287	0	77.9	45-110	0				
Acenaphthylene	1024	13	1287	0	79.6	45-105	0				
Anthracene	1213	13	1287	0	94.3	55-105	0				
Benzo(a)anthracene	1161	13	1287	0	90.2	50-110	0				
Benzo(a)pyrene	1200	13	1287	0	93.3	50-110	0				
Benzo(b)fluoranthene	1134	13	1287	0	88.1	45-115	0				
Benzo(g,h,i)perylene	1189	13	1287	0	92.4	40-125	0				
Benzo(k)fluoranthene	1215	13	1287	0	94.4	45-115	0				
Chrysene	1174	13	1287	0	91.2	55-110	0				
Dibenzo(a,h)anthracene	1159	13	1287	0	90	40-125	0				
Fluoranthene	1143	13	1287	0	88.8	55-115	0				
Fluorene	1173	13	1287	0	91.2	50-110	0				
Indeno(1,2,3-cd)pyrene	1220	13	1287	0	94.8	40-120	0				
Naphthalene	1020	13	1287	0	79.3	40-105	0				
Pyrene	1207	13	1287	0	93.8	45-125	0				
Surr: 2-Fluorobiphenyl	2462	0	3217	0	76.5	12-100	0				
Surr: 4-Terphenyl-d14	2900	0	3217	0	90.1	25-137	0				
Surr: Nitrobenzene-d5	2036	0	3217	0	63.3	37-107	0				

MSD				Sample ID: 14081279-03C MSD			Units: µg/Kg		Analysis Date: 8/29/2014 05:13 AM		
Client ID:		Run ID: SVMS4_140828A			SeqNo: 2910196		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1046	13	1324	0	79	45-110	1002	4.23	30		
Acenaphthylene	1078	13	1324	0	81.4	45-105	1024	5.13	30		
Anthracene	1178	13	1324	0	89	55-105	1213	2.95	30		
Benzo(a)anthracene	1076	13	1324	0	81.3	50-110	1161	7.55	30		
Benzo(a)pyrene	1060	13	1324	0	80	50-110	1200	12.5	30		
Benzo(b)fluoranthene	1085	13	1324	0	81.9	45-115	1134	4.46	30		
Benzo(g,h,i)perylene	1069	13	1324	0	80.7	40-125	1189	10.6	30		
Benzo(k)fluoranthene	1058	13	1324	0	79.9	45-115	1215	13.9	30		
Chrysene	1065	13	1324	0	80.4	55-110	1174	9.76	30		
Dibenzo(a,h)anthracene	1063	13	1324	0	80.3	40-125	1159	8.62	30		
Fluoranthene	1053	13	1324	0	79.5	55-115	1143	8.16	30		
Fluorene	1206	13	1324	0	91.1	50-110	1173	2.78	30		
Indeno(1,2,3-cd)pyrene	1160	13	1324	0	87.6	40-120	1220	5.01	30		
Naphthalene	1074	13	1324	0	81.1	40-105	1020	5.14	30		
Pyrene	1111	13	1324	0	83.9	45-125	1207	8.26	30		
Surr: 2-Fluorobiphenyl	2621	0	3309	0	79.2	12-100	2462	6.25	40		
Surr: 4-Terphenyl-d14	2799	0	3309	0	84.6	25-137	2900	3.53	40		
Surr: Nitrobenzene-d5	2196	0	3309	0	66.4	37-107	2036	7.55	40		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62099** Instrument ID **SVMS4** Method: **SW846 8270D**

The following samples were analyzed in this batch:

14081390-01B

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62115** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: MBLK-62115-62115				Units: µg/Kg		Analysis Date: 8/29/2014 03:09 AM		
Client ID:		Run ID: VMS6_140828B			SeqNo: 2910512		Prep Date: 8/27/2014		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								
<i>Surr: 1,2-Dichloroethane-d4</i>	1003	0	1000	0	100	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	989	0	1000	0	98.9	70-130	0			
<i>Surr: Dibromofluoromethane</i>	936	0	1000	0	93.6	70-130	0			
<i>Surr: Toluene-d8</i>	996.5	0	1000	0	99.6	70-130	0			

LCS		Sample ID: LCS-62115-62115				Units: µg/Kg		Analysis Date: 8/29/2014 01:25 AM		
Client ID:		Run ID: VMS6_140828B			SeqNo: 2910510		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1010	30	1000	0	101	75-125	0			
Ethylbenzene	1013	30	1000	0	101	75-125	0			
m,p-Xylene	2014	60	2000	0	101	80-125	0			
o-Xylene	993	30	1000	0	99.3	75-125	0			
Toluene	981.5	30	1000	0	98.2	70-125	0			
Xylenes, Total	3008	90	3000	0	100	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	981.5	0	1000	0	98.2	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	1003	0	1000	0	100	70-130	0			
<i>Surr: Dibromofluoromethane</i>	1019	0	1000	0	102	70-130	0			
<i>Surr: Toluene-d8</i>	1004	0	1000	0	100	70-130	0			

MS		Sample ID: 14081312-06A MS				Units: µg/Kg		Analysis Date: 9/3/2014 11:20 AM		
Client ID:		Run ID: VMS8_140902B			SeqNo: 2915340		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	999.5	30	1000	0	100	75-125	0			
Ethylbenzene	989	30	1000	0	98.9	75-125	0			
m,p-Xylene	1956	60	2000	0	97.8	80-125	0			
o-Xylene	963.5	30	1000	0	96.4	75-125	0			
Toluene	939	30	1000	10.8	92.8	70-125	0			
Xylenes, Total	2920	90	3000	0	97.3	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	910	0	1000	0	91	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	1034	0	1000	0	103	70-130	0			
<i>Surr: Dibromofluoromethane</i>	945	0	1000	0	94.5	70-130	0			
<i>Surr: Toluene-d8</i>	988.5	0	1000	0	98.8	70-130	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62115** Instrument ID **VMS6** Method: **SW8260B**

MSD		Sample ID: 14081312-06A MSD				Units: µg/Kg		Analysis Date: 9/3/2014 11:45 AM		
Client ID:		Run ID: VMS8_140902B			SeqNo: 2915341		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	981.5	30	1000	0	98.2	75-125	999.5	1.82	30	
Ethylbenzene	1001	30	1000	0	100	75-125	989	1.21	30	
m,p-Xylene	1990	60	2000	0	99.5	80-125	1956	1.72	30	
o-Xylene	975.5	30	1000	0	97.6	75-125	963.5	1.24	30	
Toluene	933.5	30	1000	10.8	92.3	70-125	939	0.587	30	
Xylenes, Total	2966	90	3000	0	98.9	75-125	2920	1.56	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	922.5	0	1000	0	92.2	70-130	910	1.36	30	
<i>Surr: 4-Bromofluorobenzene</i>	1018	0	1000	0	102	70-130	1034	1.66	30	
<i>Surr: Dibromofluoromethane</i>	944.5	0	1000	0	94.4	70-130	945	0.0529	30	
<i>Surr: Toluene-d8</i>	964	0	1000	0	96.4	70-130	988.5	2.51	30	

The following samples were analyzed in this batch: | 14081390-01A |

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62162** Instrument ID **WETCHEM** Method: **USDA H60 Method**

MBLK	Sample ID: WBLKW1-140829-62162		Units: mmhos/cm @25°C		Analysis Date: 8/29/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140829C		SeqNo: 2910936		Prep Date: 8/29/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation ND 0.0050

DUP	Sample ID: 14081398-03B DUP		Units: mmhos/cm @25°C		Analysis Date: 8/29/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140829C		SeqNo: 2910944		Prep Date: 8/29/2014 DF: 10					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 1.124 0.050 0 0 0 0.978 13.9 50

LCS1	Sample ID: WLCS1W1-140829-62162		Units: mmhos/cm @25°C		Analysis Date: 8/29/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140829C		SeqNo: 2910937		Prep Date: 8/29/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 0.0144 0.0050 0.0149 0 96.6 85-107 0

LCS2	Sample ID: WLCS2W1-140829-62162		Units: mmhos/cm @25°C		Analysis Date: 8/29/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140829C		SeqNo: 2910945		Prep Date: 8/29/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 0.606 0.0050 0.592 0 102 85-107 0

The following samples were analyzed in this batch:

14081390-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081390
Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62182** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-62182-62182				Units: s.u.		Analysis Date: 8/28/2014 02:00 PM			
Client ID:		Run ID: WETCHEM_140828M			SeqNo: 2908742		Prep Date: 8/28/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	3.98	0	4	0	99.5	90-110	0				

DUP		Sample ID: 14081345-01B DUP				Units: s.u.		Analysis Date: 8/28/2014 02:00 PM			
Client ID:		Run ID: WETCHEM_140828M			SeqNo: 2908744		Prep Date: 8/28/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8.68	0	0	0	0	0-0	8.79	1.26	20		

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **62193** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK	Sample ID: MBLK-62193-62193		Units: mg/Kg		Analysis Date: 8/28/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140828P		SeqNo: 2909053		Prep Date: 8/27/2014 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-62193-62193		Units: mg/Kg		Analysis Date: 8/28/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140828P		SeqNo: 2909052		Prep Date: 8/27/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.768 0.50 2 0 88.4 80-120 0

MS	Sample ID: 14081320-51B MSI		Units: mg/Kg		Analysis Date: 8/28/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140828P		SeqNo: 2909038		Prep Date: 8/27/2014 DF: 100					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1070 50 1263 0 84.7 75-125 0

MS	Sample ID: 14081320-51BMS		Units: mg/Kg		Analysis Date: 8/28/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140828P		SeqNo: 2909040		Prep Date: 8/27/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.9524 0.50 1.984 0 48 75-125 0 S

MSD	Sample ID: 14081320-51BMSD		Units: mg/Kg		Analysis Date: 8/28/2014 04:00 PM					
Client ID:	Run ID: WETCHEM_140828P		SeqNo: 2909041		Prep Date: 8/27/2014 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.2024 0.50 1.984 0 10.2 75-125 0.9524 0 20 JS

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14081390
 Project: WPX KR 32-9 Cuttings 8.26.14

QC BATCH REPORT

Batch ID: **R147139** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS-R147139				Units: % of sample			Analysis Date: 8/27/2014 12:30 PM		
Client ID:	Run ID: MOIST_140827A			SeqNo: 2907523		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-R147139				Units: % of sample			Analysis Date: 8/27/2014 12:30 PM		
Client ID:	Run ID: MOIST_140827A			SeqNo: 2907521		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: 14081269-02A DUP				Units: % of sample			Analysis Date: 8/27/2014 12:30 PM		
Client ID:	Run ID: MOIST_140827A			SeqNo: 2907492		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 62.59 0.050 0 0 0 0-0 59.52 5.03 20

DUP	Sample ID: 14081386-01A DUP				Units: % of sample			Analysis Date: 8/27/2014 12:30 PM		
Client ID:	Run ID: MOIST_140827A			SeqNo: 2907512		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.11 0.050 0 0 0 0-0 20.27 0.792 20

The following samples were analyzed in this batch: 14081390-01B

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

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **27-Aug-14 09:30**

Work Order: **14081390**

Received by: **KRW**

Checklist completed by Keith Warenga 27-Aug-14
eSignature Date

Reviewed by: Ann Preston 27-Aug-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):	<input type="text" value="1.8 C"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="8/27/2014 11:11:30 AM"/>		
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:	<input type="text"/>		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-8070
Sample Receiving
ALS Laboratory Group
3352 128th Avenue
Holland, MI 49424

Origin ID: HLMA



Ship Date: 28AUG14
ActWgt: 66.0 LB
CAD: 2364848/NET/3550
Dims: 24 X 15 X 15 IN

Delivery Address Bar Code



SHIP TO: (616) 399-8070
sample receiving
ALS Laboratory Group
3352 128TH AVE
HOLLAND, MI 49424

BILL RENDER

Ref # 082014-1
Invoice #
PO # Parachute
Dept #

1 of 2

WED - 27 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 7709 5551 4990

1291

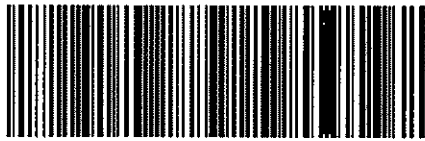
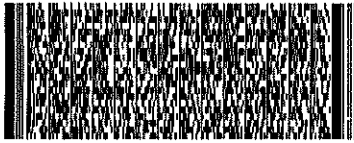
MASTER

49424

MI US

GRR

68 HLMA



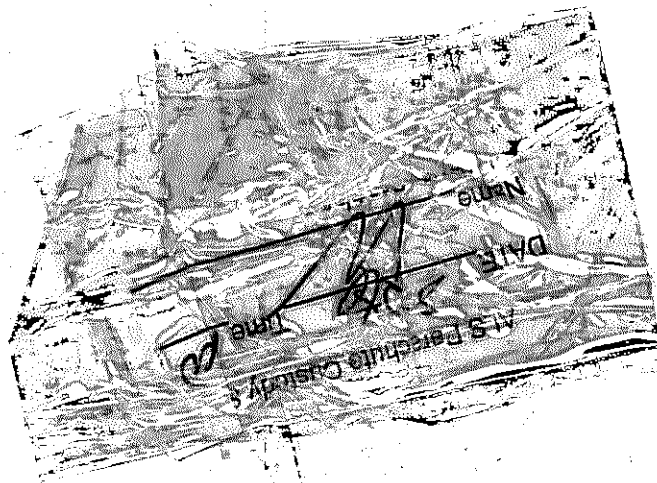
5231E0726AC

After printing this label:

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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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28-Aug-2014

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

Re: **WPX KP 32-9 Backgrounds 8.26.14**

Work Order: **14081393**

Dear Mark,

ALS Environmental received 5 samples on 27-Aug-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,

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 KP 32-9 Backgrounds 8.26.14
Work Order: 14081393

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>
14081393-01	KP 32-9-B-1	Soil		8/26/2014 09:35	8/27/2014 09:30	<input type="checkbox"/>
14081393-02	KP 32-9-B-2	Soil		8/26/2014 09:40	8/27/2014 09:30	<input type="checkbox"/>
14081393-03	KP 32-9-B-3	Soil		8/26/2014 09:45	8/27/2014 09:30	<input type="checkbox"/>
14081393-04	KP 32-9-B-4	Soil		8/26/2014 09:50	8/27/2014 09:30	<input type="checkbox"/>
14081393-05	KP 32-9-B-5	Soil		8/26/2014 09:55	8/27/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
WorkOrder: 14081393

**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
LCS D	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: 28-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
Sample ID: KP 32-9-B-1
Collection Date: 8/26/2014 09:35 AM

Work Order: 14081393
Lab ID: 14081393-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	4.9		2.1	mg/Kg-dry	5	8/28/2014 12:24 AM
MOISTURE			A2540 G			Analyst: RDM
Moisture	15		0.050	% of sample	1	8/27/2014 07:04 PM

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

ALS Group USA, Corp

Date: 28-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
Sample ID: KP 32-9-B-2
Collection Date: 8/26/2014 09:40 AM

Work Order: 14081393
Lab ID: 14081393-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	3.4		2.1	mg/Kg-dry	5	8/28/2014 12:30 AM
MOISTURE			A2540 G			Analyst: RDM
Moisture	16		0.050	% of sample	1	8/27/2014 07:04 PM

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

ALS Group USA, Corp

Date: 28-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
Sample ID: KP 32-9-B-3
Collection Date: 8/26/2014 09:45 AM

Work Order: 14081393
Lab ID: 14081393-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	3.6		2.1	mg/Kg-dry	5	8/28/2014 01:38 AM
MOISTURE			A2540 G			Analyst: KF
Moisture	14		0.050	% of sample	1	8/27/2014 07:57 PM

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

ALS Group USA, Corp

Date: 28-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
Sample ID: KP 32-9-B-4
Collection Date: 8/26/2014 09:50 AM

Work Order: 14081393
Lab ID: 14081393-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	3.7		1.9	mg/Kg-dry	5	8/28/2014 01:44 AM
MOISTURE			A2540 G			Analyst: KF
Moisture	8.6		0.050	% of sample	1	8/27/2014 07:57 PM

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

ALS Group USA, Corp

Date: 28-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX KP 32-9 Backgrounds 8.26.14
Sample ID: KP 32-9-B-5
Collection Date: 8/26/2014 09:55 AM

Work Order: 14081393
Lab ID: 14081393-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 8/27/14	Analyst: ML
Arsenic	6.2		2.6	mg/Kg-dry	5	8/28/2014 01:50 AM
MOISTURE			A2540 G			Analyst: KF
Moisture	19		0.050	% of sample	1	8/27/2014 07:57 PM

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081393
Project: WPX KP 32-9 Backgrounds 8.26.14

QC BATCH REPORT

Batch ID: **62130** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-62130-62130				Units: mg/Kg		Analysis Date: 8/27/2014 10:21 PM		
Client ID:		Run ID: ICPMS1_140827A		SeqNo: 2907579		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04416	0.25								J

LCS		Sample ID: LCS-62130-62130				Units: mg/Kg		Analysis Date: 8/27/2014 10:27 PM		
Client ID:		Run ID: ICPMS1_140827A		SeqNo: 2907580		Prep Date: 8/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.45	0.25	5	0	89	80-120	0			

MS		Sample ID: 14081393-02AMS				Units: mg/Kg		Analysis Date: 8/28/2014 12:36 AM		
Client ID: KP 32-9-B-2		Run ID: ICPMS1_140827A		SeqNo: 2907601		Prep Date: 8/27/2014		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.227	1.8	7.153	2.822	89.5	75-125	0			

MSD		Sample ID: 14081393-02AMSD				Units: mg/Kg		Analysis Date: 8/28/2014 01:07 AM		
Client ID: KP 32-9-B-2		Run ID: ICPMS1_140827A		SeqNo: 2907604		Prep Date: 8/27/2014		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.122	1.8	7.082	2.822	89	75-125	9.227	1.15	25	

The following samples were analyzed in this batch:

14081393-01A	14081393-02A	14081393-03A
14081393-04A	14081393-05A	

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14081393
 Project: WPX KP 32-9 Backgrounds 8.26.14

QC BATCH REPORT

Batch ID: **R147159** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS-R147159		Units: % of sample				Analysis Date: 8/27/2014 07:04 PM			
Client ID:	Run ID: MOIST_140827D		SeqNo: 2908352		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-R147159		Units: % of sample				Analysis Date: 8/27/2014 07:04 PM			
Client ID:	Run ID: MOIST_140827D		SeqNo: 2908351		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: 14081270-07A DUP		Units: % of sample				Analysis Date: 8/27/2014 07:04 PM			
Client ID:	Run ID: MOIST_140827D		SeqNo: 2908336		Prep Date:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 80.35 0.050 0 0 0 0-0 78.31 2.57 20

DUP	Sample ID: 14081391-01A DUP		Units: % of sample				Analysis Date: 8/27/2014 07:04 PM			
Client ID:	Run ID: MOIST_140827D		SeqNo: 2908343		Prep Date:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 21.35 0.050 0 0 0 0-0 21.2 0.705 20

The following samples were analyzed in this batch: 14081393-01A 14081393-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081393
Project: WPX KP 32-9 Backgrounds 8.26.14

QC BATCH REPORT

Batch ID: **R147172** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R147172				Units: % of sample		Analysis Date: 8/27/2014 07:57 PM			
Client ID:		Run ID: MOIST_140827E				SeqNo: 2908503		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-R147172				Units: % of sample		Analysis Date: 8/27/2014 07:57 PM			
Client ID:		Run ID: MOIST_140827E				SeqNo: 2908504		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: 14081309-51B DUP				Units: % of sample		Analysis Date: 8/27/2014 07:57 PM			
Client ID:		Run ID: MOIST_140827E				SeqNo: 2908513		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	0.31	0.050	0		0	0	0-0	0.3	3.28	20	

The following samples were analyzed in this batch:

14081393-03A	14081393-04A	14081393-05A
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ALS Laboratory Group

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

Chain-of-Custody

Form 29218

WORKORDER #	14081393
PAGE	1 of 1

PROJECT NAME	WPX KP 32-9	SAMPLER	Reed Wold	DATE	8/26/14	TURNAROUND	3 Day	DISPOSAL	By Lab or Return to Client
PROJECT No.	Backgrounds	SITE ID	KP 32-9						
COMPANY NAME	HRL Compliance	EDD FORMAT							
SEND REPORT TO	Mark Mumby	PURCHASE ORDER							
ADDRESS	2385 F 1/2 Rd	BILL TO COMPANY	WPX Energy						
CITY / STATE / ZIP	Grand Junction, CO 81508	INVOICE ATTN TO	Karolina Blancy						
PHONE	970-243-3271	ADDRESS							
FAX	970-243-3280	CITY / STATE / ZIP							
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	PHONE							
		FAX							
		E-MAIL							

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
1	KP 32-9-B-1	SO	8/26/14	9:35	1	8	X
2	B-2	↓	↓	9:40	↓	↓	X
3	B-3	↓	↓	9:45	↓	↓	X
4	B-4	↓	↓	9:50	↓	↓	X
5	B-5	↓	↓	9:55	↓	↓	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:

1.86

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
RELINQUISHED BY	<i>Reed Wold</i>	Reed Wold	8/26/14	4:00
RECEIVED BY	<i>W.M.</i>	W.M.	8-26-14	4:00
RELINQUISHED BY	<i>W.M.</i>	W.M.	8-26	4:15
RECEIVED BY	<i>Keith Wierenga</i>	Keith Wierenga	8/27/14	0930
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **27-Aug-14 09:30**

Work Order: **14081393**

Received by: **KRW**

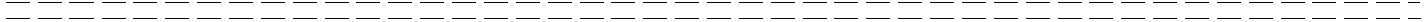
Checklist completed by Keith Warenga 27-Aug-14
eSignature Date

Reviewed by: Ann Preston 27-Aug-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):	<input type="text" value="1.8 C"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="8/27/2014 11:20:22 AM"/>		
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:	<input type="text"/>		

Login Notes:



Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (816) 398-8878
Sample Receiving
ALS Laboratory Group
3352 128th Avenue
Holland, MI 49424

Origin ID: HLMA



Ship Date: 28AUG14
Actual Wt: 06.0 LB
CAT: 22848424NET3550
Dims: 24 X 15 X 15 IN



SHIP TO: (816) 398-8878
sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

BILL REMINDER

Ref # 082814-1
Invoice #
PO # Parachute
Dept #

1 of 2

WED - 27 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 7709 5551 4990

MASTER

49424

68 HLMA

M-128
GRR



22848424NET3550

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