



Legend

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

PA 13-32
Arsenic Background Sample Location Map
T6S R95W, Section 32

April 30, 2015





16-Mar-2015

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

Re: **PA 13-32 Cuttings Vertical**

Work Order: **1503327**

Dear Karolina,

ALS Environmental received 1 sample on 06-Mar-2015 11:30 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 25.

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

Sincerely,

A handwritten signature in black ink that reads "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

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Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Cuttings Vertical
Work Order: 1503327

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>
1503327-01	PA 13-32 Cuttings Vertical	Solid		3/4/2015 14:00	3/6/2015 11:30	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC

Project: PA 13-32 Cuttings Vertical

Work Order: 1503327

Case Narrative

Batch 68431, Method DRO_8015_S, Sample 1503327-01A: Surrogate high due to matrix interference.

Batch 68673, Method CR6_7196_S, Sample 1503327-01A MS/MSD/PDS: The MS, MSD and PDS recovery was below the lower control limit for Hexavalent Chromium. The corresponding result in the parent sample may be biased low.

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

<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: 16-Mar-15

Client: WPX Energy Rocky Mountain, LLC

Project: PA 13-32 Cuttings Vertical

Work Order: 1503327

Sample ID: PA 13-32 Cuttings Vertical

Lab ID: 1503327-01

Collection Date: 3/4/2015 02:00 PM

Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep: SW3541 / 3/10/15	Analyst: IT
DRO (C10-C28)	1,800		23	mg/Kg-dry	5	3/11/2015 02:36 PM
<i>Surr: 4-Terphenyl-d14</i>	145	S	39-133	%REC	5	3/11/2015 02:36 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D		Prep: SW5035 / 3/9/15	Analyst: IT
GRO (C6-C10)	36		5.7	mg/Kg-dry	2	3/9/2015 10:28 PM
<i>Surr: Toluene-d8</i>	115		50-150	%REC	2	3/9/2015 10:28 PM
MERCURY BY CVAA			SW7471B		Prep: SW7471 / 3/9/15	Analyst: LR
Mercury	0.15		0.014	mg/Kg-dry	1	3/9/2015 07:10 PM
METALS ANALYSIS BY ICP			SW846 6010C		Prep: SW3050B / 3/10/15	Analyst: JEC
Arsenic	2.3		0.40	mg/Kg-dry	1	3/11/2015 02:55 PM
Barium	20,000		4.0	mg/Kg-dry	10	3/12/2015 10:25 AM
Cadmium	ND		0.81	mg/Kg-dry	1	3/11/2015 02:55 PM
Chromium	13		0.40	mg/Kg-dry	1	3/11/2015 02:55 PM
Copper	26		0.81	mg/Kg-dry	1	3/11/2015 02:55 PM
Lead	4.0		0.40	mg/Kg-dry	1	3/11/2015 02:55 PM
Nickel	6.9		0.40	mg/Kg-dry	1	3/11/2015 02:55 PM
Selenium	1.2		0.81	mg/Kg-dry	1	3/11/2015 02:55 PM
Silver	ND		0.40	mg/Kg-dry	1	3/11/2015 02:55 PM
Zinc	21		0.81	mg/Kg-dry	1	3/11/2015 02:55 PM
SOLUBLE CATIONS FOR SAR			SW846 6010C		Prep: USDA Method 20B / 3/11/15	Analyst: JEC
Calcium	80		5.0	mg/L	10	3/11/2015 04:02 PM
Magnesium	11		2.0	mg/L	10	3/11/2015 04:02 PM
Sodium	710		2.0	mg/L	10	3/11/2015 04:02 PM
SODIUM ADSORPTION RATIO			USDA H60 METHO		Prep: USDA Method 20B / 3/11/15	Analyst: JEC
Sodium Adsorption Ratio	20		0.010	none	1	3/11/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8270D		Prep: SW3541 / 3/10/15	Analyst: RS
Acenaphthene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Anthracene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Benzo(a)anthracene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Benzo(a)pyrene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Benzo(b)fluoranthene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Benzo(g,h,i)perylene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Benzo(k)fluoranthene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Chrysene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Dibenzo(a,h)anthracene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM

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

ALS Group USA, Corp

Date: 16-Mar-15

Client: WPX Energy Rocky Mountain, LLC

Project: PA 13-32 Cuttings Vertical

Work Order: 1503327

Sample ID: PA 13-32 Cuttings Vertical

Lab ID: 1503327-01

Collection Date: 3/4/2015 02:00 PM

Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Fluorene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Indeno(1,2,3-cd)pyrene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Naphthalene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Pyrene	ND		7.5	µg/Kg-dry	1	3/11/2015 01:12 AM
Surr: 2,4,6-Tribromophenol	89.0		34-140	%REC	1	3/11/2015 01:12 AM
Surr: 2-Fluorobiphenyl	53.0		12-100	%REC	1	3/11/2015 01:12 AM
Surr: 2-Fluorophenol	72.8		33-117	%REC	1	3/11/2015 01:12 AM
Surr: 4-Terphenyl-d14	74.5		25-137	%REC	1	3/11/2015 01:12 AM
Surr: Nitrobenzene-d5	52.9		37-107	%REC	1	3/11/2015 01:12 AM
Surr: Phenol-d6	71.7		40-106	%REC	1	3/11/2015 01:12 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 3/9/15	Analyst: BG
Benzene	ND		34	µg/Kg-dry	1	3/10/2015 09:24 AM
Ethylbenzene	ND		34	µg/Kg-dry	1	3/10/2015 09:24 AM
m,p-Xylene	ND		68	µg/Kg-dry	1	3/10/2015 09:24 AM
o-Xylene	ND		34	µg/Kg-dry	1	3/10/2015 09:24 AM
Toluene	ND		34	µg/Kg-dry	1	3/10/2015 09:24 AM
Xylenes, Total	ND		100	µg/Kg-dry	1	3/10/2015 09:24 AM
Surr: 1,2-Dichloroethane-d4	99.8		70-130	%REC	1	3/10/2015 09:24 AM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	1	3/10/2015 09:24 AM
Surr: Dibromofluoromethane	98.0		70-130	%REC	1	3/10/2015 09:24 AM
Surr: Toluene-d8	95.0		70-130	%REC	1	3/10/2015 09:24 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep: USDA Method 20B / 3/11/15	Analyst: JB
Electrical Conductivity @ Saturation	3.7		0.025	mmhos/cm @2	5	3/12/2015 11:18 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JB
Chromium, Trivalent	12		0.57	mg/Kg-dry	1	3/16/2015 03:30 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep: SW3060A / 3/12/15	Analyst: MB
Chromium, Hexavalent	ND		1.1	mg/Kg-dry	1	3/16/2015 03:00 PM
MOISTURE			E160.3M			Analyst: EVB
Moisture	12		0.050	% of sample	1	3/6/2015 03:35 PM
PH			SW9045D		Prep: EXTRACT / 3/9/15	Analyst: KF
pH	9.0			s.u.	1	3/9/2015 12:35 PM

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68431** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-68431-68431				Units: mg/Kg		Analysis Date: 3/10/2015 10:08 PM		
Client ID:		Run ID: GC8_150310A		SeqNo: 3172356		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
<i>Surr: 4-Terphenyl-d14</i>	1.458	0	2	0	72.9	39-133	0			

LCS		Sample ID: DLCSS1-68431-68431				Units: mg/Kg		Analysis Date: 3/10/2015 10:38 PM		
Client ID:		Run ID: GC8_150310A		SeqNo: 3172357		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	170	5.0	200	0	85	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	1.372	0	2	0	68.6	39-133	0			

MS		Sample ID: 1503349-01B MS				Units: mg/Kg		Analysis Date: 3/10/2015 11:08 PM		
Client ID:		Run ID: GC8_150310A		SeqNo: 3172358		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	301.5	8.3	331	16.43	86.1	48-110	0			
<i>Surr: 4-Terphenyl-d14</i>	2.236	0	3.31	0	67.6	39-133	0			

MSD		Sample ID: 1503349-01B MSD				Units: mg/Kg		Analysis Date: 3/10/2015 11:38 PM		
Client ID:		Run ID: GC8_150310A		SeqNo: 3172359		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	304.9	8.3	331.6	16.43	87	48-110	301.5	1.11	30	
<i>Surr: 4-Terphenyl-d14</i>	2.283	0	3.316	0	68.8	39-133	2.236	2.06	30	

The following samples were analyzed in this batch: 1503327-01A

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 1503327
 Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68405** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-68405-68405				Units: µg/Kg		Analysis Date: 3/9/2015 03:45 PM		
Client ID:		Run ID: GC9_150309A		SeqNo: 3170917		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5086	0	5000	0	102	50-150	0			

LCS		Sample ID: LCS-68405-68405				Units: µg/Kg		Analysis Date: 3/9/2015 03:20 PM		
Client ID:		Run ID: GC9_150309A		SeqNo: 3170916		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	489500	2,500	500000	0	97.9	70-130	0			
<i>Surr: Toluene-d8</i>	4396	0	5000	0	87.9	50-150	0			

MS		Sample ID: 1503349-01A MS				Units: µg/Kg		Analysis Date: 3/9/2015 07:04 PM		
Client ID:		Run ID: GC9_150309A		SeqNo: 3170919		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	473200	2,500	500000	0	94.6	70-130	0			
<i>Surr: Toluene-d8</i>	4373	0	5000	0	87.5	50-150	0			

MSD		Sample ID: 1503349-01A MSD				Units: µg/Kg		Analysis Date: 3/9/2015 07:29 PM		
Client ID:		Run ID: GC9_150309A		SeqNo: 3170920		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	467200	2,500	500000	0	93.4	70-130	473200	1.28	30	
<i>Surr: Toluene-d8</i>	4320	0	5000	0	86.4	50-150	4373	1.21	30	

The following samples were analyzed in this batch: 1503327-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68361** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-68361-68361				Units: mg/Kg		Analysis Date: 3/9/2015 06:29 PM		
Client ID:		Run ID: HG1_150309A				SeqNo: 3170191		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-68361-68361				Units: mg/Kg		Analysis Date: 3/9/2015 06:38 PM		
Client ID:		Run ID: HG1_150309A				SeqNo: 3170195		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1812 0.020 0.1665 0 109 80-120 0

MS		Sample ID: 1503200-01BMS				Units: mg/Kg		Analysis Date: 3/9/2015 06:47 PM		
Client ID:		Run ID: HG1_150309A				SeqNo: 3170199		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1196 0.013 0.1066 0.009133 104 75-125 0

MSD		Sample ID: 1503200-01BMSD				Units: mg/Kg		Analysis Date: 3/9/2015 06:49 PM		
Client ID:		Run ID: HG1_150309A				SeqNo: 3170200		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1139 0.012 0.1031 0.009133 102 75-125 0.1196 4.93 35

The following samples were analyzed in this batch: 1503327-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68408** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1503327-01ADUP				Units: mg/L		Analysis Date: 3/11/2015 04:08 PM		
Client ID: PA 13-32 Cuttings Vertical		Run ID: ICP2_150311A				SeqNo: 3173592		Prep Date: 3/11/2015		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	86.09	5.0	0	0	0	0-0	80.08	7.22		
Magnesium	12.02	2.0	0	0	0	0-0	10.78	10.9		
Sodium	794.8	2.0	0	0	0	0-0	714.8	10.6		

DUP		Sample ID: 1503327-01ADUP				Units: none		Analysis Date: 3/11/2015		
Client ID: PA 13-32 Cuttings Vertical		Run ID: SAR_150311A				SeqNo: 3174221		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	21.27	0.010	0	0	0		19.9	6.65	50	

The following samples were analyzed in this batch: | 1503327-01A |

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

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 1503327
 Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68436** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-68436-68436				Units: mg/L		Analysis Date: 3/11/2015 02:44 PM		
Client ID:		Run ID: ICP2_150311A			SeqNo: 3173577		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	0.009284	0.25								J
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.3434	0.50								J

LCS		Sample ID: LCS-68436-68436				Units: mg/L		Analysis Date: 3/11/2015 02:49 PM		
Client ID:		Run ID: ICP2_150311A			SeqNo: 3173578		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.606	0.25	5	0	92.1	80-120	0			
Barium	4.911	0.25	5	0	98.2	80-120	0			
Cadmium	4.57	0.50	5	0	91.4	80-120	0			
Chromium	5.101	0.25	5	0	102	80-120	0			
Copper	4.826	0.50	5	0	96.5	80-120	0			
Lead	5.158	0.25	5	0	103	80-120	0			
Nickel	4.839	0.25	5	0	96.8	80-120	0			
Selenium	4.685	0.50	5	0	93.7	80-120	0			
Silver	5.189	0.25	5	0	104	80-120	0			
Zinc	5.044	0.50	5	0	101	80-120	0			

MS		Sample ID: 1503374-01AMS				Units: mg/Kg		Analysis Date: 3/11/2015 03:23 PM		
Client ID:		Run ID: ICP2_150311A			SeqNo: 3173584		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.14	0.36	7.153	8.869	102	75-125	0			
Barium	306	0.36	7.153	287.6	258	75-125	0			SO
Cadmium	6.999	0.72	7.153	0.1487	95.8	75-125	0			
Chromium	21.6	0.36	7.153	11.54	141	75-125	0			S
Copper	18.15	0.72	7.153	10.06	113	75-125	0			
Lead	19.03	0.36	7.153	12.42	92.5	75-125	0			
Nickel	21.33	0.36	7.153	12.76	120	75-125	0			
Selenium	6.489	0.72	7.153	-0.3193	95.2	75-125	0			
Silver	8.369	0.36	7.153	-0.1213	119	75-125	0			
Zinc	66.83	0.72	7.153	51.77	210	75-125	0			SO

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68436** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 1503374-01AMSD				Units: mg/Kg		Analysis Date: 3/11/2015 03:29 PM		
Client ID:		Run ID: ICP2_150311A			SeqNo: 3173585		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.07	0.36	7.184	8.869	86.3	75-125	16.14	6.83	20	
Barium	291	0.36	7.184	287.6	47.8	75-125	306	5.03	20	SO
Cadmium	7.131	0.72	7.184	0.1487	97.2	75-125	6.999	1.87	20	
Chromium	17.56	0.36	7.184	11.54	83.8	75-125	21.6	20.7	20	R
Copper	14.73	0.72	7.184	10.06	65.1	75-125	18.15	20.8	20	SR
Lead	17.01	0.36	7.184	12.42	63.9	75-125	19.03	11.2	20	S
Nickel	17.09	0.36	7.184	12.76	60.2	75-125	21.33	22.1	20	SR
Selenium	6.934	0.72	7.184	-0.3193	101	75-125	6.489	6.63	20	
Silver	8.524	0.36	7.184	-0.1213	120	75-125	8.369	1.83	20	
Zinc	56.24	0.72	7.184	51.77	62.2	75-125	66.83	17.2	20	SO

The following samples were analyzed in this batch: 1503327-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68430** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-68430-68430				Units: µg/Kg		Analysis Date: 3/10/2015 05:28 PM		
Client ID:		Run ID: SVMS4_150310A		SeqNo: 3172489		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
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: 2,4,6-Tribromophenol</i>	1366	0	1667	0	82	34-140	0			
<i>Surr: 2-Fluorobiphenyl</i>	1239	0	1667	0	74.3	12-100	0			
<i>Surr: 2-Fluorophenol</i>	1385	0	1667	0	83.1	33-117	0			
<i>Surr: 4-Terphenyl-d14</i>	1440	0	1667	0	86.4	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	946.3	0	1667	0	56.8	37-107	0			
<i>Surr: Phenol-d6</i>	1346	0	1667	0	80.8	40-106	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68430** Instrument ID **SVMS4** Method: **SW846 8270D**

LCS		Sample ID: SLCSS1-68430-68430				Units: µg/Kg		Analysis Date: 3/10/2015 05:54 PM		
Client ID:		Run ID: SVMS4_150310A			SeqNo: 3172492		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	521.7	6.7	666.7	0	78.2	45-110	0			
Anthracene	565.3	6.7	666.7	0	84.8	55-105	0			
Benzo(a)anthracene	565	6.7	666.7	0	84.7	50-110	0			
Benzo(a)pyrene	553	6.7	666.7	0	82.9	50-110	0			
Benzo(b)fluoranthene	535	6.7	666.7	0	80.2	45-115	0			
Benzo(g,h,i)perylene	655	6.7	666.7	0	98.2	40-125	0			
Benzo(k)fluoranthene	540	6.7	666.7	0	81	45-115	0			
Chrysene	604.7	6.7	666.7	0	90.7	55-110	0			
Dibenzo(a,h)anthracene	638.3	6.7	666.7	0	95.7	40-125	0			
Fluoranthene	577.7	6.7	666.7	0	86.6	55-115	0			
Fluorene	549	6.7	666.7	0	82.3	50-110	0			
Indeno(1,2,3-cd)pyrene	648	6.7	666.7	0	97.2	40-120	0			
Naphthalene	479	6.7	666.7	0	71.8	40-105	0			
Pyrene	577.7	6.7	666.7	0	86.6	45-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1574</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>94.4</i>	<i>34-140</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>1265</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>75.9</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>1412</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>84.7</i>	<i>33-117</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>1525</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>91.5</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>1052</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>63.1</i>	<i>37-107</i>	<i>0</i>			
<i>Surr: Phenol-d6</i>	<i>1349</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>81</i>	<i>40-106</i>	<i>0</i>			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68430** Instrument ID **SVMS4** Method: **SW846 8270D**

MS		Sample ID: 1503349-01B MS				Units: µg/Kg		Analysis Date: 3/10/2015 07:21 PM		
Client ID:		Run ID: SVMS4_150310A		SeqNo: 3172521		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1001	13	1281	0	78.1	45-110	0			
Anthracene	1072	13	1281	0	83.6	55-105	0			
Benzo(a)anthracene	1082	13	1281	0	84.4	50-110	0			
Benzo(a)pyrene	1065	13	1281	0	83.1	50-110	0			
Benzo(b)fluoranthene	1104	13	1281	0	86.2	45-115	0			
Benzo(g,h,i)perylene	1078	13	1281	0	84.1	40-125	0			
Benzo(k)fluoranthene	1093	13	1281	0	85.3	45-115	0			
Chrysene	1133	13	1281	0	88.4	55-110	0			
Dibenzo(a,h)anthracene	1082	13	1281	0	84.4	40-125	0			
Fluoranthene	1138	13	1281	0	88.8	55-115	0			
Fluorene	1071	13	1281	0	83.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1094	13	1281	0	85.4	40-120	0			
Naphthalene	937.3	13	1281	0	73.1	40-105	0			
Pyrene	1015	13	1281	0	79.2	45-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>3019</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>94.2</i>	<i>34-140</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>2418</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>75.5</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>2805</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>87.6</i>	<i>33-117</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>2718</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>84.9</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>2040</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>63.7</i>	<i>37-107</i>	<i>0</i>			
<i>Surr: Phenol-d6</i>	<i>2771</i>	<i>0</i>	<i>3203</i>	<i>0</i>	<i>86.5</i>	<i>40-106</i>	<i>0</i>			

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

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 1503327
 Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68430** Instrument ID **SVMS4** Method: **SW846 8270D**

MSD		Sample ID: 1503349-01B MSD				Units: µg/Kg		Analysis Date: 3/10/2015 07:46 PM		
Client ID:		Run ID: SVMS4_150310A		SeqNo: 3172524		Prep Date: 3/10/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1048	13	1329	0	78.9	45-110	1001	4.64	30	
Anthracene	1125	13	1329	0	84.7	55-105	1072	4.87	30	
Benzo(a)anthracene	1097	13	1329	0	82.6	50-110	1082	1.41	30	
Benzo(a)pyrene	1071	13	1329	0	80.6	50-110	1065	0.628	30	
Benzo(b)fluoranthene	1119	13	1329	0	84.2	45-115	1104	1.27	30	
Benzo(g,h,i)perylene	1121	13	1329	0	84.4	40-125	1078	3.98	30	
Benzo(k)fluoranthene	1083	13	1329	0	81.5	45-115	1093	0.875	30	
Chrysene	1168	13	1329	0	87.9	55-110	1133	3.11	30	
Dibenzo(a,h)anthracene	1109	13	1329	0	83.5	40-125	1082	2.49	30	
Fluoranthene	1172	13	1329	0	88.2	55-115	1138	3	30	
Fluorene	1131	13	1329	0	85.1	50-110	1071	5.46	30	
Indeno(1,2,3-cd)pyrene	1115	13	1329	0	83.9	40-120	1094	1.91	30	
Naphthalene	980.5	13	1329	0	73.8	40-105	937.3	4.5	30	
Pyrene	1058	13	1329	0	79.6	45-125	1015	4.12	30	
Surr: 2,4,6-Tribromophenol	3114	0	3321	0	93.8	34-140	3019	3.11	40	
Surr: 2-Fluorobiphenyl	2568	0	3321	0	77.3	12-100	2418	6	40	
Surr: 2-Fluorophenol	2925	0	3321	0	88.1	33-117	2805	4.17	40	
Surr: 4-Terphenyl-d14	2749	0	3321	0	82.8	25-137	2718	1.11	40	
Surr: Nitrobenzene-d5	2162	0	3321	0	65.1	37-107	2040	5.79	40	
Surr: Phenol-d6	2903	0	3321	0	87.4	40-106	2771	4.63	40	

The following samples were analyzed in this batch: | 1503327-01A |

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

Client: WPX Energy Rocky Mountain, LLC

QC BATCH REPORT

Work Order: 1503327

Project: PA 13-32 Cuttings Vertical

Batch ID: 68392

Instrument ID VMS5

Method: SW8260B

MBLK		Sample ID: MBLK-68392-68392				Units: µg/Kg		Analysis Date: 3/9/2015 01:10 PM		
Client ID:		Run ID: VMS5_150309A			SeqNo: 3170853		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	1032	0	1000	0	103	70-130	0			
Surr: 4-Bromofluorobenzene	995.5	0	1000	0	99.6	70-130	0			
Surr: Dibromofluoromethane	1027	0	1000	0	103	70-130	0			
Surr: Toluene-d8	965.5	0	1000	0	96.6	70-130	0			

LCS		Sample ID: LCS-68392-68392				Units: µg/Kg		Analysis Date: 3/9/2015 11:53 AM		
Client ID:		Run ID: VMS5_150309A			SeqNo: 3170852		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1148	30	1000	0	115	75-125	0			
Ethylbenzene	1112	30	1000	0	111	75-125	0			
m,p-Xylene	2224	60	2000	0	111	80-125	0			
o-Xylene	1096	30	1000	0	110	75-125	0			
Toluene	1088	30	1000	0	109	70-125	0			
Xylenes, Total	3319	90	3000	0	111	75-125	0			
Surr: 1,2-Dichloroethane-d4	1004	0	1000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	1035	0	1000	0	104	70-130	0			
Surr: Dibromofluoromethane	1025	0	1000	0	102	70-130	0			
Surr: Toluene-d8	962	0	1000	0	96.2	70-130	0			

MS		Sample ID: 1503325-01A MS				Units: µg/Kg		Analysis Date: 3/10/2015 09:35 PM		
Client ID:		Run ID: VMS7_150310A			SeqNo: 3172243		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1158	30	1000	0	116	75-125	0			
Ethylbenzene	1078	30	1000	0	108	75-125	0			
m,p-Xylene	2190	60	2000	0	110	80-125	0			
o-Xylene	1046	30	1000	0	105	75-125	0			
Toluene	1092	30	1000	0	109	70-125	0			
Xylenes, Total	3236	90	3000	0	108	75-125	0			
Surr: 1,2-Dichloroethane-d4	964	0	1000	0	96.4	70-130	0			
Surr: 4-Bromofluorobenzene	1002	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	972.5	0	1000	0	97.2	70-130	0			
Surr: Toluene-d8	933.5	0	1000	0	93.4	70-130	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68392** Instrument ID **VMS5** Method: **SW8260B**

MSD		Sample ID: 1503325-01A MSD				Units: µg/Kg		Analysis Date: 3/10/2015 10:00 PM		
Client ID:		Run ID: VMS7_150310A			SeqNo: 3172244		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1120	30	1000	0	112	75-125	1158	3.34	30	
Ethylbenzene	1044	30	1000	0	104	75-125	1078	3.2	30	
m,p-Xylene	2124	60	2000	0	106	80-125	2190	3.04	30	
o-Xylene	1038	30	1000	0	104	75-125	1046	0.816	30	
Toluene	1074	30	1000	0	107	70-125	1092	1.66	30	
Xylenes, Total	3162	90	3000	0	105	75-125	3236	2.31	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	953	0	1000	0	95.3	70-130	964	1.15	30	
<i>Surr: 4-Bromofluorobenzene</i>	1006	0	1000	0	101	70-130	1002	0.448	30	
<i>Surr: Dibromofluoromethane</i>	984.5	0	1000	0	98.4	70-130	972.5	1.23	30	
<i>Surr: Toluene-d8</i>	954	0	1000	0	95.4	70-130	933.5	2.17	30	

The following samples were analyzed in this batch: 1503327-01A

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

Client: WPX Energy Rocky Mountain, LLC

Work Order: 1503327

Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68399**

Instrument ID **WETCHEM**

Method: **SW9045D**

LCS		Sample ID: LCS-R158762-68399				Units: s.u.		Analysis Date: 3/9/2015 12:35 PM		
Client ID:		Run ID: WETCHEM_150309B		SeqNo: 3169519		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.79	0	4	0	94.8	90-110	0			

DUP		Sample ID: 1503198-01B DUP				Units: s.u.		Analysis Date: 3/9/2015 12:35 PM		
Client ID:		Run ID: WETCHEM_150309B		SeqNo: 3169509		Prep Date: 3/9/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	12.45	0	0	0	0	0-0	12.3	1.21	20	

The following samples were analyzed in this batch:

1503327-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503327
Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68408** Instrument ID **Titrator 1** Method: **USDA H60 Metho**

DUP	Sample ID: 1503327-01A DUP		Units: mmhos/cm @25°		Analysis Date: 3/12/2015 11:18 AM					
Client ID: PA 13-32 Cuttings Vertical	Run ID: TITRATOR 1_150312A		SeqNo: 3174366		Prep Date: 3/11/2015 DF: 5					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.197	0.025	0	0	0		3.709	12.4	50	

The following samples were analyzed in this batch:

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

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 1503327
 Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **68673** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK	Sample ID: MBLK-68673-68673		Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM					
Client ID:	Run ID: WETCHEM_150316E		SeqNo: 3179071		Prep Date: 3/12/2015 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS	Sample ID: LCS-68673-68673		Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM					
Client ID:	Run ID: WETCHEM_150316E		SeqNo: 3179070		Prep Date: 3/12/2015 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.65 1.0 5 0 93 80-120 0

MS	Sample ID: 1503327-01A MS		Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM					
Client ID: PA 13-32 Cuttings Vertical	Run ID: WETCHEM_150316E		SeqNo: 3179064		Prep Date: 3/12/2015 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.765 0.98 4.902 0.3725 28.4 75-125 0 S

MS	Sample ID: 1503327-01A MSI		Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM					
Client ID: PA 13-32 Cuttings Vertical	Run ID: WETCHEM_150316E		SeqNo: 3179066		Prep Date: 3/12/2015 DF: 100					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2018 100 2269 0.3725 88.9 75-125 0

MSD	Sample ID: 1503327-01A MSD		Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM					
Client ID: PA 13-32 Cuttings Vertical	Run ID: WETCHEM_150316E		SeqNo: 3179065		Prep Date: 3/12/2015 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.04 0.99 4.95 0.3725 33.7 75-125 1.765 14.5 20 S

The following samples were analyzed in this batch:

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

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 1503327
 Project: PA 13-32 Cuttings Vertical

QC BATCH REPORT

Batch ID: **R158759** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R158759				Units: % of sample			Analysis Date: 3/6/2015 03:35 PM		
Client ID:		Run ID: MOIST_150306B				SeqNo: 3169469		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-R158759				Units: % of sample			Analysis Date: 3/6/2015 03:35 PM		
Client ID:		Run ID: MOIST_150306B				SeqNo: 3169468		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: 1503295-01A DUP				Units: % of sample			Analysis Date: 3/6/2015 03:35 PM		
Client ID:		Run ID: MOIST_150306B				SeqNo: 3169462		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	20.29	0.050	0		0	0		19.58	3.56	20	

DUP		Sample ID: 1503327-01A DUP				Units: % of sample			Analysis Date: 3/6/2015 03:35 PM		
Client ID: PA 13-32 Cuttings Vertical		Run ID: MOIST_150306B				SeqNo: 3169466		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	12.54	0.050	0		0	0		11.91	5.15	20	

The following samples were analyzed in this batch: 1503327-01A

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



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 20278

WORKORDER # **1503327**

PROJECT NAME		PA 13-32 cuttings vertical		SAMPLER				DATE				PAGE		1 of 1	
PROJECT No.				SITE ID		PA 13-32 cuttings		TURNAROUND		5 day		DISPOSAL		By Lab or Return to Client	
COMPANY NAME		WPX Energy		BILL TO COMPANY		WPX Energy		E-MAIL		910-1					
SEND REPORT TO		Blaney		INVOICE ATTN TO		Karolina Blaney; Leo Braun									
ADDRESS				ADDRESS		1058 Co Rd 215									
CITY/STATE/ZIP				CITY/STATE/ZIP		Parachute CO 81635									
PHONE				PHONE		970-683-2295									
FAX				FAX											
E-MAIL		Karolina.blaney@wpxenergy.com		E-MAIL		Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com									
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC								
	PA 13-32 cuttings vertical	S	3/4/2015	14:00	1	B	x x								

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

For metals or anions, please detail analytes below.

Comments:

(Handwritten signature/initials)

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)

2.4°C

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>Blaney</i>	karolina blaney	3/4/2015	18:00
RECEIVED BY	<i>Blaney</i>	<i>Blaney</i>	3-4-15	1600
RELINQUISHED BY	<i>Wilson</i>	<i>Wilson</i>	3-4-15	1700
RECEIVED BY	<i>Wilson</i>	<i>Wilson</i>	3/6/15	11:30
RELINQUISHED BY				
RECEIVED BY				

From: (616) 298-1033
Nick Martinez
ALS Environmental
127 E. 1st Street
PARACHUTE, CO 81035

Origin ID: RLA



Ship Date: 04MAR15
ActWgt: 40.0 LB
CAD: 2264840/INET3810
Dims: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 030415-2
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070
sample receiving
ALS Laboratory Group
3352 128TH AVE

BILL SENDER

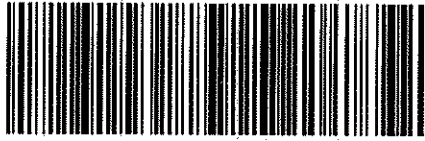
HOLLAND, MI 49424

THU - 05 MAR 10:30A
PRIORITY OVERNIGHT

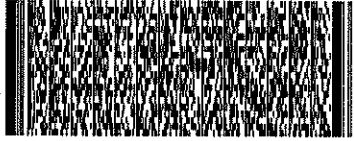
TRK# 7730 5285 1168
0261

49424
MI-US
GRR

XX HLMA



5371187DAEE48

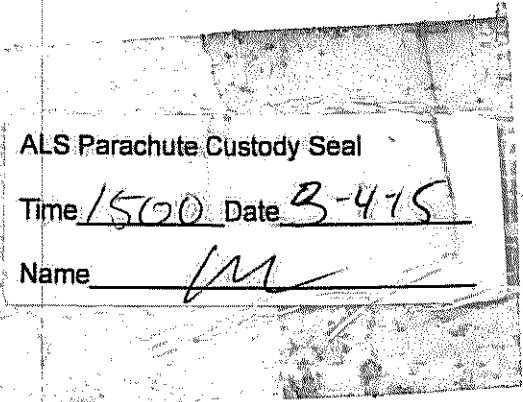


After printing this label:

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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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Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **06-Mar-15 11:30**

Work Order: **1503327**

Received by: **SAW**

Checklist completed by Diane Shaw 06-Mar-15
eSignature Date

Reviewed by: Chad Whilton 06-Mar-15
eSignature Date

Matrices: **Solid**

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):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

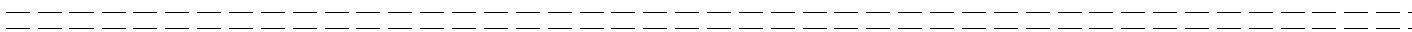
Water - VOA vials have zero headspace? Yes No No VOA vials submitted

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:



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

Report Summary

Monday March 16, 2015

Report Number: L753288


Samples Received: 03/13/15

Client Project: PA 13-32 VERTICAL

Description: PA 13-32 Vertical

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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REPORT OF ANALYSIS

Ms. Karolina Blaney
 WPX Energy
 1058 County Road 215
 Parachute, CO 81635

March 16, 2015

Date Received : March 13, 2015
 Description : PA 13-32 Vertical
 Sample ID : PA 13-32 VERTICAL
 Collected By :
 Collection Date : 03/11/15 10:30

ESC Sample # : L753288-01

Site ID : PA 13-32 VERTICAL

Project # : PA 13-32 VERTICAL

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Barium	10000	2.5	mg/kg	6010B	03/16/15	5
TPH (GC/FID) Low Fraction Surrogate Recovery (70-130) a,a,a-Trifluorotoluene(FID)	BDL 99.3	0.50	mg/kg % Rec.	8015D/GRO 8015D/GRO	03/14/15 03/14/15	5 1
TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	1500 0.00	80.	mg/kg % Rec.	3546/DRO 3546/DRO	03/16/15 03/16/15	20 20

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 Note:
 The reported analytical results relate only to the sample submitted.
 This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/16/15 17:15 Printed: 03/16/15 17:15
 L753288-01 (DRO) - W

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L753288-01	WG775881	SAMP	o-Terphenyl	R3024893	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



YOUR LAB OF CHOICE

WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L753288

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March 16, 2015

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	< .1	mg/kg	102.0	59-128	WG775777	03/14/15 13:21
TPH (GC/FID) High Fraction o-Terphenyl	< 4	mg/kg	88.70	50-150	WG775881	03/15/15 08:59
Barium	< .5	mg/kg			WG775567	03/16/15 12:54

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	5.5	5.17	94.0 101.0	63.5-137 59-128	WG775777
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	60	54.8	91.4 83.90	50-150 50-150	WG775881
Barium	mg/kg	100	102.	102.	80-120	WG775567

Analyte	Units	Result	Laboratory Control Sample Duplicate		Limit	RPD	Limit	Batch
			Ref	%Rec				
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	5.10	5.17	93.0 101.0	63.5-137 59-128	1.39	20	WG775777
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	53.9	54.8	90.0 83.00	50-150 50-150	1.73	20	WG775881
Barium	mg/kg	110.	102.	110.	80-120	8.00	20	WG775567

Analyte	Units	MS Res	Matrix Spike			Limit	Ref Samp	Batch
			Ref Res	TV	% Rec			
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	20.6	0.0	5.5	75.0 100.0	28.5-138 59-128	L753526-01	WG775777
Barium	mg/kg	158.	63.2	100	95.0	75-125	L753136-01	WG775567

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	22.6	20.6	82.2 101.0	28.5-138 59-128	9.46	23.6	L753526-01	WG775777
Barium	mg/kg	155.	158.	91.5	75-125	2.00	20	L753136-01	WG775567

Post Spike

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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March 16, 2015

Serial Dilution

Batch number /Run number / Sample number cross reference

WG775777: R3024820: L753288-01
WG775881: R3024893 R3024908: L753288-01
WG775567: R3024998: L753288-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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March 16, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



20-Mar-2015

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

Re: **PA 13-32 Vertical**

Work Order: **15031065**

Dear Karolina,

ALS Environmental received 1 sample on 19-Mar-2015 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 10.

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

Sincerely,

A handwritten signature in black ink that reads "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
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 ALS Environmental logo icon consisting of a stylized flame inside a triangle.

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Vertical
Work Order: 15031065

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>
15031065-01	PA 13-32 Vertical	Soil		3/17/2015 09:30	3/19/2015 09:30	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Vertical
WorkOrder: 15031065

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

<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: 20-Mar-15

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Vertical
Sample ID: PA 13-32 Vertical
Collection Date: 3/17/2015 09:30 AM

Work Order: 15031065
Lab ID: 15031065-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep: SW3541 / 3/19/15	Analyst: IT
DRO (C10-C28)	190		4.5	mg/Kg-dry	1	3/19/2015 11:24 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>64.0</i>		<i>39-133</i>	<i>%REC</i>	1	3/19/2015 11:24 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D		Prep: SW5035 / 3/19/15	Analyst: IT
GRO (C6-C10)	ND		2.8	mg/Kg-dry	1	3/20/2015 06:58 AM
<i>Surr: Toluene-d8</i>	<i>122</i>		<i>50-150</i>	<i>%REC</i>	1	3/20/2015 06:58 AM
MOISTURE			E160.3M			Analyst: EVB
Moisture	9.5		0.050	% of sample	1	3/19/2015 02:45 PM

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15031065
Project: PA 13-32 Vertical

QC BATCH REPORT

Batch ID: **68811** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-68811-68811				Units: mg/Kg		Analysis Date: 3/19/2015 05:54 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187020		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	ND	5.0									
<i>Surr: 4-Terphenyl-d14</i>	1.57	0	2	0	78.5	39-133	0				

LCS		Sample ID: DLCSS1-68811-68811				Units: mg/Kg		Analysis Date: 3/19/2015 06:24 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187021		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	160	5.0	200	0	80	61-109	0				
<i>Surr: 4-Terphenyl-d14</i>	1.157	0	2	0	57.9	39-133	0				

MS		Sample ID: 15031054-02A MS				Units: mg/Kg		Analysis Date: 3/19/2015 06:54 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187022		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	284.7	8.0	319.4	5.237	87.5	48-110	0				
<i>Surr: 4-Terphenyl-d14</i>	2.013	0	3.194	0	63	39-133	0				

MSD		Sample ID: 15031054-02A MSD				Units: mg/Kg		Analysis Date: 3/19/2015 07:24 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187023		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	351.7	7.9	314.9	5.237	110	48-110	284.7	21	30	S	
<i>Surr: 4-Terphenyl-d14</i>	2.181	0	3.149	0	69.3	39-133	2.013	8.01	30		

The following samples were analyzed in this batch: 15031065-01A

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 15031065
 Project: PA 13-32 Vertical

QC BATCH REPORT

Batch ID: **68808** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-68808-68808				Units: µg/Kg		Analysis Date: 3/19/2015 07:45 PM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187153		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5823	0	5000	0	116	50-150	0			

LCS		Sample ID: LCS-68808-68808				Units: µg/Kg		Analysis Date: 3/19/2015 06:55 PM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187148		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	617100	2,500	500000	0	123	70-130	0			
<i>Surr: Toluene-d8</i>	5248	0	5000	0	105	50-150	0			

MS		Sample ID: 15031023-01A MS				Units: µg/Kg		Analysis Date: 3/20/2015 02:24 AM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187171		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	536600	2,500	500000	0	107	70-130	0			
<i>Surr: Toluene-d8</i>	5340	0	5000	0	107	50-150	0			

MSD		Sample ID: 15031023-01A MSD				Units: µg/Kg		Analysis Date: 3/20/2015 02:49 AM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187172		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	529900	2,500	500000	0	106	70-130	536600	1.26	30	
<i>Surr: Toluene-d8</i>	5291	0	5000	0	106	50-150	5340	0.931	30	

The following samples were analyzed in this batch:

15031065-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15031065
Project: PA 13-32 Vertical

QC BATCH REPORT

Batch ID: **R159567** Instrument ID **MOIST** Method: **E160.3M**

MBLK	Sample ID: WBLKS-R159567				Units: % of sample			Analysis Date: 3/19/2015 02:45 PM		
Client ID:	Run ID: MOIST_150319A			SeqNo: 3187371		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-R159567				Units: % of sample			Analysis Date: 3/19/2015 02:45 PM		
Client ID:	Run ID: MOIST_150319A			SeqNo: 3187370		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: 15031054-01A DUP				Units: % of sample			Analysis Date: 3/19/2015 02:45 PM		
Client ID:	Run ID: MOIST_150319A			SeqNo: 3187351		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.42 0.050 0 0 0 12.61 1.52 20

DUP	Sample ID: 1503928-22A DUP				Units: % of sample			Analysis Date: 3/19/2015 02:45 PM		
Client ID:	Run ID: MOIST_150319A			SeqNo: 3187365		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 16.25 0.050 0 0 0 16.58 2.01 20

The following samples were analyzed in this batch:

15031065-01A

3/18/2015

FedEx Ship Manager - Print Your Label(s)

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

Origin ID: RILA



Ship Date: 18MAR15
ActWgt: 66.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

PARACHUTE, CO 81635



J151215022303uv

SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

Delivery Address Bar Code



Ref # 031815-1
Invoice #
PO # Parachute
Dept #

2 of 4

THU - 19 MAR 10:30A
PRIORITY OVERNIGHT

MPS# 7731 6159 2379

0263

Mstr# 7731 6159 2357

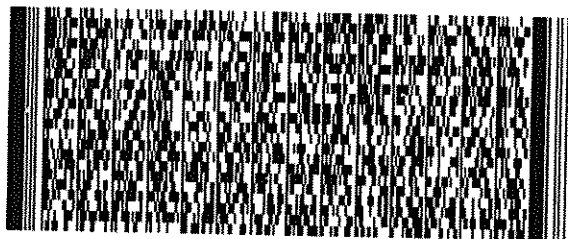
0201

XX HLMA

49424

MI-US

GRR



537 J11879AEE4B

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.

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ALS Parachute Custody Seal

Time 1700 Date 3-18

Name [Signature]

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **19-Mar-15 09:30**

Work Order: **15031065**

Received by: **TBB**

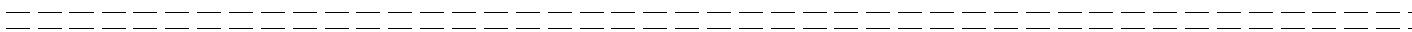
Checklist completed by Diane Shaw 19-Mar-15
eSignature Date

Reviewed by: Chad Whilton 20-Mar-15
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>4.4 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>3/19/2015 10:19:12 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:	<u></u>		

Login Notes:



Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

CorrectiveAction:



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

Report Summary

Friday March 13, 2015

Report Number: L752943


Samples Received: 03/12/15

Client Project: PA 13-32 HORIZONTAL

Description: PA 13-32 Horizontal

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jared Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Ms. Karolina Blaney
 WPX Energy
 1058 County Road 215
 Parachute, CO 81635

March 13, 2015

Date Received : March 12, 2015
 Description : PA 13-32 Horizontal

ESC Sample # : L752943-01

Sample ID : PA 13-32 HORIZONTAL

Site ID : PA 13-32 HORIZONTAL

Collected By :
 Collection Date : 03/11/15 10:00

Project # : PA 13-32 HORIZONTAL

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	03/13/15	1
Chromium,Trivalent	8.2	5.0	mg/kg	Calc.	03/13/15	1
ORP	130		mV	2580 B-2011	03/12/15	1
pH	7.7	0.10	su	9045D	03/13/15	1
Sodium Adsorption Ratio	7.6			Calc.	03/13/15	1
Specific Conductance	3100		umhos/cm	9050AMod	03/12/15	1
Mercury	0.037	0.020	mg/kg	7471A	03/12/15	1
Arsenic	BDL	10.	mg/kg	6010B	03/13/15	5
Barium	18000	2.5	mg/kg	6010B	03/13/15	5
Cadmium	BDL	2.5	mg/kg	6010B	03/13/15	5
Chromium	8.2	5.0	mg/kg	6010B	03/13/15	5
Copper	10.	10.	mg/kg	6010B	03/13/15	5
Lead	8.4	2.5	mg/kg	6010B	03/13/15	5
Nickel	BDL	10.	mg/kg	6010B	03/13/15	5
Selenium	BDL	10.	mg/kg	6010B	03/13/15	5
Silver	BDL	5.0	mg/kg	6010B	03/13/15	5
Zinc	41.	25.	mg/kg	6010B	03/13/15	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/13/15 18:56 Printed: 03/13/15 18:56
 L752943-01 (PH) - 7.7 at 22.6c



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REPORT OF ANALYSIS

Ms. Karolina Blaney
 WPX Energy
 1058 County Road 215
 Parachute, CO 81635

March 13, 2015

Date Received : March 12, 2015
 Description : PA 13-32 Horizontal

ESC Sample # : L752943-02

Sample ID : PA 13-32 HORIZONTAL

Site ID : PA 13-32 HORIZONTAL

Collected By :
 Collection Date : 03/11/15 10:00

Project # : PA 13-32 HORIZONTAL

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	0.018	0.0025	mg/kg	8021	03/13/15	5
Toluene	0.12	0.025	mg/kg	8021	03/13/15	5
Ethylbenzene	0.050	0.0025	mg/kg	8021	03/13/15	5
Total Xylene	0.81	0.0075	mg/kg	8021	03/13/15	5
TPH (GC/FID) Low Fraction	12.	0.50	mg/kg	8015	03/13/15	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	89.6		% Rec.	8015	03/13/15	1
a,a,a-Trifluorotoluene(PID)	97.5		% Rec.	8021	03/13/15	1
TPH (GC/FID) High Fraction	600	20.	mg/kg	3546/DRO	03/13/15	5
Surrogate recovery(%)						
o-Terphenyl	68.5		% Rec.	3546/DRO	03/13/15	5
Polynuclear Aromatic Hydrocarbons						
Anthracene	0.032	0.0060	mg/kg	8270C-SIM	03/12/15	1
Acenaphthene	0.023	0.0060	mg/kg	8270C-SIM	03/12/15	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Fluorene	0.031	0.0060	mg/kg	8270C-SIM	03/12/15	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	03/12/15	1
Naphthalene	0.063	0.020	mg/kg	8270C-SIM	03/12/15	1
Pyrene	0.048	0.0060	mg/kg	8270C-SIM	03/12/15	1
Surrogate Recovery						
Nitrobenzene-d5	151.		% Rec.	8270C-SIM	03/12/15	1
2-Fluorobiphenyl	64.9		% Rec.	8270C-SIM	03/12/15	1
p-Terphenyl-d14	70.1		% Rec.	8270C-SIM	03/12/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 03/13/15 18:56 Printed: 03/13/15 18:56



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Ms. Karolina Blaney
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Parachute, CO 81635

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March 13, 2015

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Mercury	< .02	mg/kg			WG775128	03/12/15 18:06
Arsenic	< 2	mg/kg			WG775283	03/12/15 23:44
Barium	< .5	mg/kg			WG775283	03/12/15 23:44
Cadmium	< .5	mg/kg			WG775283	03/12/15 23:44
Chromium	< 1	mg/kg			WG775283	03/12/15 23:44
Copper	< 2	mg/kg			WG775283	03/12/15 23:44
Lead	< .5	mg/kg			WG775283	03/12/15 23:44
Nickel	< 2	mg/kg			WG775283	03/12/15 23:44
Selenium	< 2	mg/kg			WG775283	03/12/15 23:44
Silver	< 1	mg/kg			WG775283	03/12/15 23:44
Zinc	< 5	mg/kg			WG775283	03/12/15 23:44
Chromium, Hexavalent	< 2	mg/kg			WG775313	03/13/15 04:48
Specific Conductance	1.63	umhos/cm			WG775013	03/12/15 15:44
Acenaphthene	< .006	mg/kg			WG775264	03/12/15 20:27
Anthracene	< .006	mg/kg			WG775264	03/12/15 20:27
Benzo(a)anthracene	< .006	mg/kg			WG775264	03/12/15 20:27
Benzo(a)pyrene	< .006	mg/kg			WG775264	03/12/15 20:27
Benzo(b)fluoranthene	< .006	mg/kg			WG775264	03/12/15 20:27
Benzo(k)fluoranthene	< .006	mg/kg			WG775264	03/12/15 20:27
Chrysene	< .006	mg/kg			WG775264	03/12/15 20:27
Dibenz(a,h)anthracene	< .006	mg/kg			WG775264	03/12/15 20:27
Fluoranthene	< .006	mg/kg			WG775264	03/12/15 20:27
Fluorene	< .006	mg/kg			WG775264	03/12/15 20:27
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG775264	03/12/15 20:27
Naphthalene	< .02	mg/kg			WG775264	03/12/15 20:27
Pyrene	< .006	mg/kg			WG775264	03/12/15 20:27
2-Fluorobiphenyl		% Rec.	74.70	38.2-135	WG775264	03/12/15 20:27
Nitrobenzene-d5		% Rec.	74.20	28.4-151	WG775264	03/12/15 20:27
p-Terphenyl-d14		% Rec.	86.10	34.2-141	WG775264	03/12/15 20:27
TPH (GC/FID) High Fraction	< 4	mg/kg			WG775106	03/12/15 20:45
o-Terphenyl		% Rec.	76.80	50-150	WG775106	03/12/15 20:45
Benzene	< .0005	mg/kg			WG775396	03/13/15 14:16
Ethylbenzene	< .0005	mg/kg			WG775396	03/13/15 14:16
Toluene	< .005	mg/kg			WG775396	03/13/15 14:16
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG775396	03/13/15 14:16
Total Xylene	< .0015	mg/kg			WG775396	03/13/15 14:16
a,a,a-Trifluorotoluene(FID)		% Rec.	102.0	59-128	WG775396	03/13/15 14:16
a,a,a-Trifluorotoluene(PID)		% Rec.	100.0	54-144	WG775396	03/13/15 14:16

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chromium, Hexavalent	mg/kg	0.0	0.0	0.0	0.0	20	L752942-01	WG775313
ORP	mV	110.	110.	0.0	0.0	20	L752653-01	WG775005
ORP	mV	120.	120.	0.0	0.0	20	L753014-06	WG775005

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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March 13, 2015

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Specific Conductance	umhos/cm	4300	4300	0.233	20	L752473-02	WG775013
Specific Conductance	umhos/cm	3400	3400	0.587	20	L752764-06	WG775013
pH	su	6.60	6.60	0.303	1	L752704-01	WG775312
pH	su	7.10	7.10	0.562	1	L753014-12	WG775312

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Mercury	mg/kg	.458	0.367	80.0	80-120	WG775128
Arsenic	mg/kg	100	91.9	92.0	80-120	WG775283
Barium	mg/kg	100	96.5	96.0	80-120	WG775283
Cadmium	mg/kg	100	94.2	94.0	80-120	WG775283
Chromium	mg/kg	100	94.0	94.0	80-120	WG775283
Copper	mg/kg	100	93.9	94.0	80-120	WG775283
Lead	mg/kg	100	94.3	94.0	80-120	WG775283
Nickel	mg/kg	100	90.6	91.0	80-120	WG775283
Selenium	mg/kg	100	95.8	96.0	80-120	WG775283
Silver	mg/kg	100	92.2	92.0	80-120	WG775283
Zinc	mg/kg	100	90.7	91.0	80-120	WG775283
Chromium, Hexavalent	mg/kg	59.8	55.4	92.6	80-120	WG775313
ORP	mV	100	102.	102.	90-110	WG775005
Specific Conductance	umhos/cm	759	771.	102.	85-115	WG775013
Acenaphthene	mg/kg	.08	0.0685	85.6	48.7-127	WG775264
Anthracene	mg/kg	.08	0.0830	104.	51.3-136	WG775264
Benzo(a)anthracene	mg/kg	.08	0.0640	80.0	55-126	WG775264
Benzo(a)pyrene	mg/kg	.08	0.0574	71.8	51.9-127	WG775264
Benzo(b)fluoranthene	mg/kg	.08	0.0611	76.4	54-125	WG775264
Benzo(k)fluoranthene	mg/kg	.08	0.0813	102.	53.9-132	WG775264
Chrysene	mg/kg	.08	0.0772	96.5	55.7-133	WG775264
Dibenz(a,h)anthracene	mg/kg	.08	0.0578	72.3	52.6-137	WG775264
Fluoranthene	mg/kg	.08	0.0660	82.5	54-132	WG775264
Fluorene	mg/kg	.08	0.0617	77.2	48.7-127	WG775264
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0615	76.9	53.8-138	WG775264
Naphthalene	mg/kg	.08	0.0706	88.2	42-127	WG775264
Pyrene	mg/kg	.08	0.0887	111.	54-129	WG775264
2-Fluorobiphenyl				72.70	38.2-135	WG775264
Nitrobenzene-d5				66.10	28.4-151	WG775264
p-Terphenyl-d14				76.60	34.2-141	WG775264
pH	su	5.9	5.91	100.	98.3-101.7	WG775312
TPH (GC/FID) High Fraction	mg/kg	60	52.9	88.1	50-150	WG775106
o-Terphenyl				82.00	50-150	WG775106

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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March 13, 2015

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0416	83.1	70-130	WG775396
Ethylbenzene	mg/kg	.05	0.0434	86.8	70-130	WG775396
Toluene	mg/kg	.05	0.0424	84.9	70-130	WG775396
Total Xylene	mg/kg	.15	0.134	89.6	70-130	WG775396
a,a,a-Trifluorotoluene(FID)				102.0	59-128	WG775396
a,a,a-Trifluorotoluene(PID)				98.80	54-144	WG775396
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.44	99.0	63.5-137	WG775396
a,a,a-Trifluorotoluene(FID)				102.0	59-128	WG775396

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Mercury	mg/kg	0.418	0.367	91.0	80-120	13.0	20	WG775128
Arsenic	mg/kg	81.8	91.9	82.0	80-120	12.0	20	WG775283
Barium	mg/kg	86.2	96.5	86.0	80-120	11.0	20	WG775283
Cadmium	mg/kg	84.5	94.2	84.0	80-120	11.0	20	WG775283
Chromium	mg/kg	83.7	94.0	84.0	80-120	12.0	20	WG775283
Copper	mg/kg	84.5	93.9	84.0	80-120	11.0	20	WG775283
Lead	mg/kg	85.0	94.3	85.0	80-120	10.0	20	WG775283
Nickel	mg/kg	81.2	90.6	81.0	80-120	11.0	20	WG775283
Selenium	mg/kg	85.6	95.8	86.0	80-120	11.0	20	WG775283
Silver	mg/kg	83.0	92.2	83.0	80-120	11.0	20	WG775283
Zinc	mg/kg	80.9	90.7	81.0	80-120	11.0	20	WG775283
Chromium, Hexavalent	mg/kg	55.6	55.4	93.0	80-120	0.360	20	WG775313
ORP	mV	102.	102.	102.	90-110	0.0	20	WG775005
Specific Conductance	umhos/	771.	771.	102.	85-115	0.0	20	WG775013
Acenaphthene	mg/kg	0.0710	0.0685	89.0	48.7-127	3.64	20	WG775264
Anthracene	mg/kg	0.0868	0.0830	108.	51.3-136	4.48	20	WG775264
Benzo(a)anthracene	mg/kg	0.0645	0.0640	81.0	55-126	0.880	20	WG775264
Benzo(a)pyrene	mg/kg	0.0600	0.0574	75.0	51.9-127	4.36	20	WG775264
Benzo(b)fluoranthene	mg/kg	0.0612	0.0611	76.0	54-125	0.120	20	WG775264
Benzo(k)fluoranthene	mg/kg	0.0844	0.0813	105.	53.9-132	3.64	20	WG775264
Chrysene	mg/kg	0.0832	0.0772	104.	55.7-133	7.50	20	WG775264
Dibenz(a,h)anthracene	mg/kg	0.0571	0.0578	71.0	52.6-137	1.20	20	WG775264
Fluoranthene	mg/kg	0.0700	0.0660	88.0	54-132	5.89	20	WG775264
Fluorene	mg/kg	0.0640	0.0617	80.0	48.7-127	3.68	20	WG775264
Indeno(1,2,3-cd)pyrene	mg/kg	0.0626	0.0615	78.0	53.8-138	1.72	20	WG775264
Naphthalene	mg/kg	0.0738	0.0706	92.0	42-127	4.48	20	WG775264
Pyrene	mg/kg	0.0932	0.0887	116.	54-129	5.02	20	WG775264
2-Fluorobiphenyl				78.70	38.2-135			WG775264
Nitrobenzene-d5				74.70	28.4-151			WG775264
p-Terphenyl-d14				80.80	34.2-141			WG775264
pH	su	5.91	5.91	100.	98.3-101.7	0.0	20	WG775312
TPH (GC/FID) High Fraction	mg/kg	53.1	52.9	88.0	50-150	0.430	20	WG775106
o-Terphenyl				81.20	50-150			WG775106

* Performance of this Analyte is outside of established criteria.

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzene	mg/kg	0.0462	0.0416	92.0	70-130	10.5	20	WG775396
Ethylbenzene	mg/kg	0.0454	0.0434	91.0	70-130	4.52	20	WG775396
Toluene	mg/kg	0.0458	0.0424	92.0	70-130	7.70	20	WG775396
Total Xylene	mg/kg	0.136	0.134	91.0	70-130	1.33	20	WG775396
a,a,a-Trifluorotoluene(FID)				101.0	59-128			WG775396
a,a,a-Trifluorotoluene(PID)				99.50	54-144			WG775396
TPH (GC/FID) Low Fraction	mg/kg	5.44	5.44	99.0	63.5-137	0.0	20	WG775396
a,a,a-Trifluorotoluene(FID)				103.0	59-128			WG775396

Analyte	Units	MS Res	Matrix Spike			Limit	Ref Samp	Batch
			Ref Res	TV	% Rec			
Mercury	mg/kg	0.463	0.00366	.458	100.	75-125	L752388-01	WG775128
Chromium,Hexavalent	mg/kg	20.2	0.0	20	100.	75-125	L752942-01	WG775313
Acenaphthene	mg/kg	0.0655	0.0	.08	82.0	39.4-132	L752957-01	WG775264
Anthracene	mg/kg	0.0770	0.0	.08	96.0	36.7-144	L752957-01	WG775264
Benzo(a)anthracene	mg/kg	0.0678	0.0	.08	85.0	28-144	L752957-01	WG775264
Benzo(a)pyrene	mg/kg	0.0666	0.0	.08	83.0	23.8-147	L752957-01	WG775264
Benzo(b)fluoranthene	mg/kg	0.0627	0.000868	.08	77.0	18.2-147	L752957-01	WG775264
Benzo(k)fluoranthene	mg/kg	0.0712	0.0	.08	89.0	26.5-143	L752957-01	WG775264
Chrysene	mg/kg	0.0685	0.0	.08	86.0	27.4-150	L752957-01	WG775264
Dibenz(a,h)anthracene	mg/kg	0.0563	0.0	.08	70.0	13.8-150	L752957-01	WG775264
Fluoranthene	mg/kg	0.0668	0.0	.08	83.0	23.2-158	L752957-01	WG775264
Fluorene	mg/kg	0.0594	0.0	.08	74.0	30.8-139	L752957-01	WG775264
Indeno(1,2,3-cd)pyrene	mg/kg	0.0598	0.0	.08	75.0	10.7-155	L752957-01	WG775264
Naphthalene	mg/kg	0.0677	0.000879	.08	84.0	34.9-133	L752957-01	WG775264
Pyrene	mg/kg	0.0847	0.0	.08	110.	22.6-151	L752957-01	WG775264
2-Fluorobiphenyl					70.60	38.2-135		WG775264
Nitrobenzene-d5					67.60	28.4-151		WG775264
p-Terphenyl-d14					76.10	34.2-141		WG775264
TPH (GC/FID) High Fraction	mg/kg	98.6	41.2	60	96.0	50-150	L752761-02	WG775106
o-Terphenyl					65.50	50-150		WG775106
Arsenic	mg/kg	103.	6.27	10	96.0	75-125	L752821-03	WG775283
Barium	mg/kg	23000	22200	10	830.*	75-125	L752821-03	WG775283
Cadmium	mg/kg	93.2	-3.17	10	93.0	75-125	L752821-03	WG775283
Chromium	mg/kg	106.	9.46	10	97.0	75-125	L752821-03	WG775283
Copper	mg/kg	116.	21.7	10	95.0	75-125	L752821-03	WG775283
Lead	mg/kg	98.1	3.35	10	95.0	75-125	L752821-03	WG775283
Nickel	mg/kg	99.3	7.09	10	92.0	75-125	L752821-03	WG775283
Selenium	mg/kg	101.	3.53	10	97.0	75-125	L752821-03	WG775283
Silver	mg/kg	91.0	-0.392	10	91.0	75-125	L752821-03	WG775283
Zinc	mg/kg	127.	45.0	10	82.0	75-125	L752821-03	WG775283
Benzene	mg/kg	0.161	0.000450	.05	64.0	49.7-127	L752761-01	WG775396
Ethylbenzene	mg/kg	0.145	0.000451	.05	58.0	40.8-141	L752761-01	WG775396
Toluene	mg/kg	0.156	0.00113	.05	62.0	49.8-132	L752761-01	WG775396
Total Xylene	mg/kg	0.451	0.00219	.15	60.0	41.2-140	L752761-01	WG775396
a,a,a-Trifluorotoluene(PID)					97.30	54-144		WG775396
TPH (GC/FID) Low Fraction	mg/kg	14.0	0.0	5.5	51.0	28.5-138	L752761-01	WG775396
a,a,a-Trifluorotoluene(FID)					99.30	59-128		WG775396

* Performance of this Analyte is outside of established criteria.
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March 13, 2015

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/kg	0.450	0.463	97.5	75-125	3.00	20	L752388-01	WG775128
Chromium,Hexavalent	mg/kg	20.4	20.2	102.	75-125	0.985	20	L752942-01	WG775313
Acenaphthene	mg/kg	0.0686	0.0655	85.7	39.4-132	4.60	20	L752957-01	WG775264
Anthracene	mg/kg	0.0791	0.0770	98.9	36.7-144	2.73	20.7	L752957-01	WG775264
Benzo(a)anthracene	mg/kg	0.0700	0.0678	87.4	28-144	3.10	24.7	L752957-01	WG775264
Benzo(a)pyrene	mg/kg	0.0701	0.0666	87.6	23.8-147	5.18	25.3	L752957-01	WG775264
Benzo(b)fluoranthene	mg/kg	0.0597	0.0627	73.5	18.2-147	4.96	29.5	L752957-01	WG775264
Benzo(k)fluoranthene	mg/kg	0.0813	0.0712	102.	26.5-143	13.1	26.1	L752957-01	WG775264
Chrysene	mg/kg	0.0751	0.0685	93.9	27.4-150	9.14	25.7	L752957-01	WG775264
Dibenz(a,h)anthracene	mg/kg	0.0593	0.0563	74.1	13.8-150	5.27	25.8	L752957-01	WG775264
Fluoranthene	mg/kg	0.0695	0.0668	86.9	23.2-158	4.10	26	L752957-01	WG775264
Fluorene	mg/kg	0.0624	0.0594	78.0	30.8-139	4.93	20	L752957-01	WG775264
Indeno(1,2,3-cd)pyrene	mg/kg	0.0619	0.0598	77.4	10.7-155	3.51	26.9	L752957-01	WG775264
Naphthalene	mg/kg	0.0706	0.0677	87.1	34.9-133	4.22	20.4	L752957-01	WG775264
Pyrene	mg/kg	0.0899	0.0847	112.	22.6-151	5.93	25.1	L752957-01	WG775264
2-Fluorobiphenyl				73.90	38.2-135				WG775264
Nitrobenzene-d5				70.00	28.4-151				WG775264
p-Terphenyl-d14				80.60	34.2-141				WG775264
TPH (GC/FID) High Fraction	mg/kg	91.8	98.6	84.3	50-150	7.12	20	L752761-02	WG775106
o-Terphenyl				70.30	50-150				WG775106
Arsenic	mg/kg	99.0	103.	92.8	75-125	3.00	20	L752821-03	WG775283
Barium	mg/kg	24500	23000	2280*	75-125	6.00	20	L752821-03	WG775283
Cadmium	mg/kg	94.8	93.2	98.0	75-125	2.00	20	L752821-03	WG775283
Chromium	mg/kg	108.	106.	99.0	75-125	2.00	20	L752821-03	WG775283
Copper	mg/kg	1000	116.	981.*	75-125	158.*	20	L752821-03	WG775283
Lead	mg/kg	134.	98.1	131.*	75-125	31.0*	20	L752821-03	WG775283
Nickel	mg/kg	102.	99.3	95.2	75-125	3.00	20	L752821-03	WG775283
Selenium	mg/kg	108.	101.	104.	75-125	6.00	20	L752821-03	WG775283
Silver	mg/kg	93.2	91.0	93.5	75-125	2.00	20	L752821-03	WG775283
Zinc	mg/kg	635.	127.	590.*	75-125	133.*	20	L752821-03	WG775283
Benzene	mg/kg	0.205	0.161	81.7	49.7-127	23.8*	23.5	L752761-01	WG775396
Ethylbenzene	mg/kg	0.194	0.145	77.3	40.8-141	29.0*	23.8	L752761-01	WG775396
Toluene	mg/kg	0.198	0.156	78.7	49.8-132	23.5	23.5	L752761-01	WG775396
Total Xylene	mg/kg	0.595	0.451	79.1	41.2-140	27.5*	23.7	L752761-01	WG775396
a,a,a-Trifluorotoluene(PID)				97.50	54-144				WG775396
TPH (GC/FID) Low Fraction	mg/kg	18.8	14.0	68.2	28.5-138	29.0*	23.6	L752761-01	WG775396
a,a,a-Trifluorotoluene(FID)				100.0	59-128				WG775396

Post Spike

* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

March 13, 2015

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG775128: R3024407: L752943-01
WG775283: R3024441 R3024567: L752943-01
WG775313: R3024454: L752943-01
WG775005: R3024503: L752943-01
WG775013: R3024508: L752943-01
WG775264: R3024510: L752943-02
WG775312: R3024516: L752943-01
WG775106: R3024538 R3024549: L752943-02
WG775365: R3024557: L752943-01
WG775396: R3024666: L752943-02

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
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March 13, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



20-Mar-2015

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

Re: **PA 13-32 Horizontal**

Work Order: **15031061**

Dear Karolina,

ALS Environmental received 1 sample on 19-Mar-2015 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 black ink that reads "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
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 small blue triangle with a yellow flame.

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Horizontal
Work Order: 15031061

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>
15031061-01	PA 13-32 Horizontal	Soil		3/17/2015 09:00	3/19/2015 09:30	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: PA 13-32 Horizontal
WorkOrder: 15031061

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

<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: 20-Mar-15

Client: WPX Energy Rocky Mountain, LLC

Project: PA 13-32 Horizontal

Work Order: 15031061

Sample ID: PA 13-32 Horizontal

Lab ID: 15031061-01

Collection Date: 3/17/2015 09:00 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep: SW3541 / 3/19/15	Analyst: IT
DRO (C10-C28)	320		4.4	mg/Kg-dry	1	3/19/2015 10:24 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>88.9</i>		<i>39-133</i>	<i>%REC</i>	1	3/19/2015 10:24 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D		Prep: SW5035 / 3/19/15	Analyst: IT
GRO (C6-C10)	ND		2.6	mg/Kg-dry	1	3/20/2015 06:33 AM
<i>Surr: Toluene-d8</i>	<i>116</i>		<i>50-150</i>	<i>%REC</i>	1	3/20/2015 06:33 AM
METALS ANALYSIS BY ICP			SW846 6010C		Prep: SW3050B / 3/19/15	Analyst: JEC
Barium	5,700		3.9	mg/Kg-dry	10	3/20/2015 01:54 PM
MOISTURE			E160.3M			Analyst: EVB
Moisture	5.1		0.050	% of sample	1	3/19/2015 02:45 PM

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15031061
Project: PA 13-32 Horizontal

QC BATCH REPORT

Batch ID: **68811** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-68811-68811				Units: mg/Kg		Analysis Date: 3/19/2015 05:54 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187020		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

DRO (C10-C28) ND 5.0
Surr: 4-Terphenyl-d14 1.57 0 2 0 78.5 39-133 0

LCS		Sample ID: DLCSS1-68811-68811				Units: mg/Kg		Analysis Date: 3/19/2015 06:24 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187021		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

DRO (C10-C28) 160 5.0 200 0 80 61-109 0
Surr: 4-Terphenyl-d14 1.157 0 2 0 57.9 39-133 0

MS		Sample ID: 15031054-02A MS				Units: mg/Kg		Analysis Date: 3/19/2015 06:54 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187022		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

DRO (C10-C28) 284.7 8.0 319.4 5.237 87.5 48-110 0
Surr: 4-Terphenyl-d14 2.013 0 3.194 0 63 39-133 0

MSD		Sample ID: 15031054-02A MSD				Units: mg/Kg		Analysis Date: 3/19/2015 07:24 PM			
Client ID:		Run ID: GC8_150319A		SeqNo: 3187023		Prep Date: 3/19/2015		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

DRO (C10-C28) 351.7 7.9 314.9 5.237 110 48-110 284.7 21 30 S
Surr: 4-Terphenyl-d14 2.181 0 3.149 0 69.3 39-133 2.013 8.01 30

The following samples were analyzed in this batch: 15031061-01A

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 15031061
 Project: PA 13-32 Horizontal

QC BATCH REPORT

Batch ID: **68808** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-68808-68808				Units: µg/Kg		Analysis Date: 3/19/2015 07:45 PM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187153		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5823	0	5000	0	116	50-150	0			

LCS		Sample ID: LCS-68808-68808				Units: µg/Kg		Analysis Date: 3/19/2015 06:55 PM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187148		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	617100	2,500	500000	0	123	70-130	0			
<i>Surr: Toluene-d8</i>	5248	0	5000	0	105	50-150	0			

MS		Sample ID: 15031023-01A MS				Units: µg/Kg		Analysis Date: 3/20/2015 02:24 AM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187171		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	536600	2,500	500000	0	107	70-130	0			
<i>Surr: Toluene-d8</i>	5340	0	5000	0	107	50-150	0			

MSD		Sample ID: 15031023-01A MSD				Units: µg/Kg		Analysis Date: 3/20/2015 02:49 AM		
Client ID:		Run ID: GC9_150319A		SeqNo: 3187172		Prep Date: 3/19/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	529900	2,500	500000	0	106	70-130	536600	1.26	30	
<i>Surr: Toluene-d8</i>	5291	0	5000	0	106	50-150	5340	0.931	30	

The following samples were analyzed in this batch:

15031061-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15031061
Project: PA 13-32 Horizontal

QC BATCH REPORT

Batch ID: **R159567** Instrument ID **MOIST** Method: **E160.3M**

MBLK	Sample ID: WBLKS-R159567		Units: % of sample		Analysis Date: 3/19/2015 02:45 PM					
Client ID:	Run ID: MOIST_150319A		SeqNo: 3187371		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-R159567		Units: % of sample		Analysis Date: 3/19/2015 02:45 PM					
Client ID:	Run ID: MOIST_150319A		SeqNo: 3187370		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: 15031054-01A DUP		Units: % of sample		Analysis Date: 3/19/2015 02:45 PM					
Client ID:	Run ID: MOIST_150319A		SeqNo: 3187351		Prep Date:					
					DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.42 0.050 0 0 0 12.61 1.52 20

DUP	Sample ID: 1503928-22A DUP		Units: % of sample		Analysis Date: 3/19/2015 02:45 PM					
Client ID:	Run ID: MOIST_150319A		SeqNo: 3187365		Prep Date:					
					DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 16.25 0.050 0 0 0 16.58 2.01 20

The following samples were analyzed in this batch:

15031061-01A

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

Origin ID: RILA



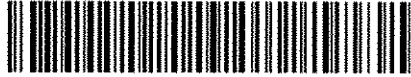
J151215022303uv

Ship Date: 18MAR15
ActWgt: 66.0 LB
CAD: 2264840/NET3610

Dims: 24 X 15 X 15 IN

PARACHUTE, CO 81635

Delivery Address Bar Code



SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

Ref # 031815-1
Invoice #
PO # Parachute
Dept #

THU - 19 MAR 10:30A
PRIORITY OVERNIGHT

2 of 4

MPS# 7731 6159 2379

0263

Mstr# 7731 6159 2357

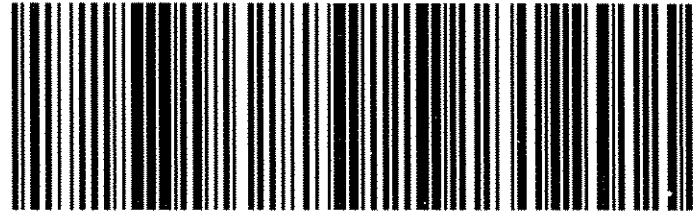
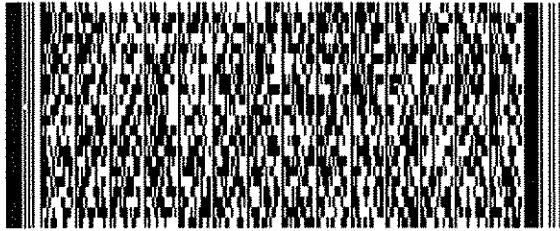
0201

49424

MI-US

GRR

XX HLMA



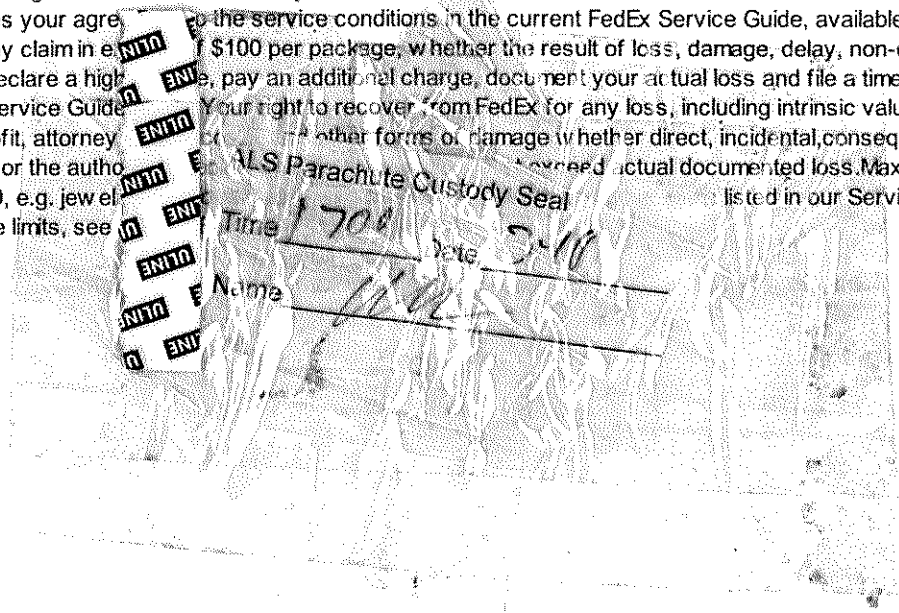
537J1879AVE4B

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 high value shipment, 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, or other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry. Written claims must be filed within strict time limits, see Service Guide.



Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **19-Mar-15 09:30**

Work Order: **15031061**

Received by: **TBB**

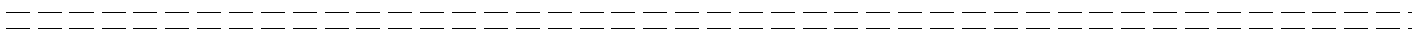
Checklist completed by Diane Shaw 19-Mar-15
eSignature Date

Reviewed by: Chad Whilton 20-Mar-15
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>4.4 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>3/19/2015 10:16:36 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:	<u></u>		

Login Notes:



Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

CorrectiveAction:



05-Nov-2014

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

Re: **WPX PA 13-32 Backgrounds 10.30.14**

Work Order: **14101823**

Dear Mark,

ALS Environmental received 3 samples on 31-Oct-2014 10:00 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 10.

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 ALS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX PA 13-32 Backgrounds 10.30.14
Work Order: 14101823

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>
14101823-01	PA 13-32-BK-1	Soil		10/30/2014 11:35	10/31/2014 10:00	<input type="checkbox"/>
14101823-02	PA 13-32-BK-2	Soil		10/30/2014 11:38	10/31/2014 10:00	<input type="checkbox"/>
14101823-03	PA 13-32-BK-3	Soil		10/30/2014 11:43	10/31/2014 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 13-32 Backgrounds 10.30.14
WorkOrder: 14101823

**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: 05-Nov-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 13-32 Backgrounds 10.30.14
Sample ID: PA 13-32-BK-1
Collection Date: 10/30/2014 11:35 AM

Work Order: 14101823
Lab ID: 14101823-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	10		SW846 6010C 0.37	mg/Kg-dry	1	Prep: SW3050B / 10/31/14 Analyst: JEC 10/31/2014 06:45 PM
MOISTURE						
Moisture	4.6		A2540 G 0.050	% of sample	1	Analyst: EVB 10/31/2014 03:45 PM

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

ALS Group USA, Corp

Date: 05-Nov-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 13-32 Backgrounds 10.30.14
Sample ID: PA 13-32-BK-2
Collection Date: 10/30/2014 11:38 AM

Work Order: 14101823
Lab ID: 14101823-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			SW846 6010C	Prep: SW3050B / 10/31/14	Analyst: JEC	
Arsenic	9.5		0.35	mg/Kg-dry	1	10/31/2014 06:50 PM
MOISTURE			A2540 G	Analyst: EVB		
Moisture	6.1		0.050	% of sample	1	10/31/2014 03:45 PM

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

ALS Group USA, Corp

Date: 05-Nov-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 13-32 Backgrounds 10.30.14
Sample ID: PA 13-32-BK-3
Collection Date: 10/30/2014 11:43 AM

Work Order: 14101823
Lab ID: 14101823-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	8.1		SW846 6010C 0.40	mg/Kg-dry	1	Prep: SW3050B / 10/31/14 Analyst: JEC 10/31/2014 07:18 PM
MOISTURE						
Moisture	6.0		A2540 G 0.050	% of sample	1	Analyst: EVB 10/31/2014 03:45 PM

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101823
Project: WPX PA 13-32 Backgrounds 10.30.14

QC BATCH REPORT

Batch ID: **64547** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-64547-64547				Units: mg/Kg		Analysis Date: 10/31/2014 05:59 PM		
Client ID:		Run ID: ICP2_141031B		SeqNo: 3013182		Prep Date: 10/31/2014		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-64547-64547				Units: mg/Kg		Analysis Date: 10/31/2014 06:04 PM		
Client ID:		Run ID: ICP2_141031B		SeqNo: 3013183		Prep Date: 10/31/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.698	0.25	5	0	94	80-120	0			

MS		Sample ID: 14101823-03AMS				Units: mg/Kg		Analysis Date: 10/31/2014 07:24 PM		
Client ID: PA 13-32-BK-3		Run ID: ICP2_141031B		SeqNo: 3013197		Prep Date: 10/31/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.46	0.38	7.508	7.58	105	75-125	0			

MSD		Sample ID: 14101823-03AMSD				Units: mg/Kg		Analysis Date: 10/31/2014 07:29 PM		
Client ID: PA 13-32-BK-3		Run ID: ICP2_141031B		SeqNo: 3013198		Prep Date: 10/31/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.57	0.37	7.496	7.58	93.2	75-125	15.46	5.94	20	

The following samples were analyzed in this batch: 14101823-01A 14101823-02A 14101823-03A

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14101823
 Project: WPX PA 13-32 Backgrounds 10.30.14

QC BATCH REPORT

Batch ID: **R151634** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS-R151634				Units: % of sample			Analysis Date: 10/31/2014 03:45 PM		
Client ID:	Run ID: MOIST_141031C			SeqNo: 3013684		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-R151634				Units: % of sample			Analysis Date: 10/31/2014 03:45 PM		
Client ID:	Run ID: MOIST_141031C			SeqNo: 3013683		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: 14101540-01B DUP				Units: % of sample			Analysis Date: 10/31/2014 03:45 PM		
Client ID:	Run ID: MOIST_141031C			SeqNo: 3013662		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.77 0.050 0 0 0 0-0 14.98 8.42 20

DUP	Sample ID: 14101767-01B DUP				Units: % of sample			Analysis Date: 10/31/2014 03:45 PM		
Client ID:	Run ID: MOIST_141031C			SeqNo: 3013670		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 15.95 0.050 0 0 0 0-0 15.49 2.93 20

The following samples were analyzed in this batch: 14101823-01A 14101823-02A 14101823-03A

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



ALS Environmental

3352 128th Avenue Holland, MI 49424
 PH: (616) 399-0070

Chain-of-Custody

WORKORDER # **14101823**

PROJECT NAME: PA13-32 Backgrounds		SAMPLER: Mike Lobato		DATE: 10/30/14		PAGE: 1 of 1	
PROJECT No.		SITE ID: PA13-32		TURNAROUND: 3 Day		DISPOSAL: By Lab or Return to Client	
COMPANY NAME: HRL Compliance Solutions, Inc.		BILL TO COMPANY: WPX Energy		Arsenic			
SEND REPORT TO: Mark Mumby		INVOICE ATTN TO: Karolina Blaney					
ADDRESS: 2385 F 1/2 Road		ADDRESS: 1058 Co. Rd. 215					
CITY/STATE/ZIP: Grand Junction, CO 81505		CITY/STATE/ZIP: Parachute, CO 81635					
PHONE: 970-243-3271		PHONE: 970-683-2295					
FAX: 970-243-3280		FAX:					
E-MAIL: mmumby@hrlcomp.com; mlobato@hrlcomp.com		E-MAIL: Karolina.blaney@wpxenergy.com					
E-MAIL:		E-MAIL:					
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
1	PA13-32-Bk-1	Soil	10/30/14	1135	1	8	X
2	PA13-32-Bk-2	↓	↓	1138	1	8	X
3	PA13-32-Bk-3	↓	↓	1143	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:

4.8 DM

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)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>Mike Lobato</i>	Mike Lobato	10/30/14	1328
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	10/30/14	1328
RELINQUISHED BY	<i>[Signature]</i>	<i>[Signature]</i>	10/30/14	1328
RECEIVED BY	<i>[Signature]</i>	Diane E. Shea	10/31/14	0800
RELINQUISHED BY				
RECEIVED BY				

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

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **31-Oct-14 10:00**

Work Order: **14101823**

Received by: **DS**

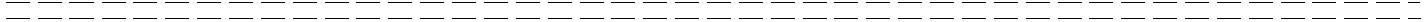
Checklist completed by Diane Shaw 31-Oct-14
eSignature Date

Reviewed by: Ann Preston 02-Nov-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="4.8 c"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="10/31/2014 12:45:17 PM"/>		
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: