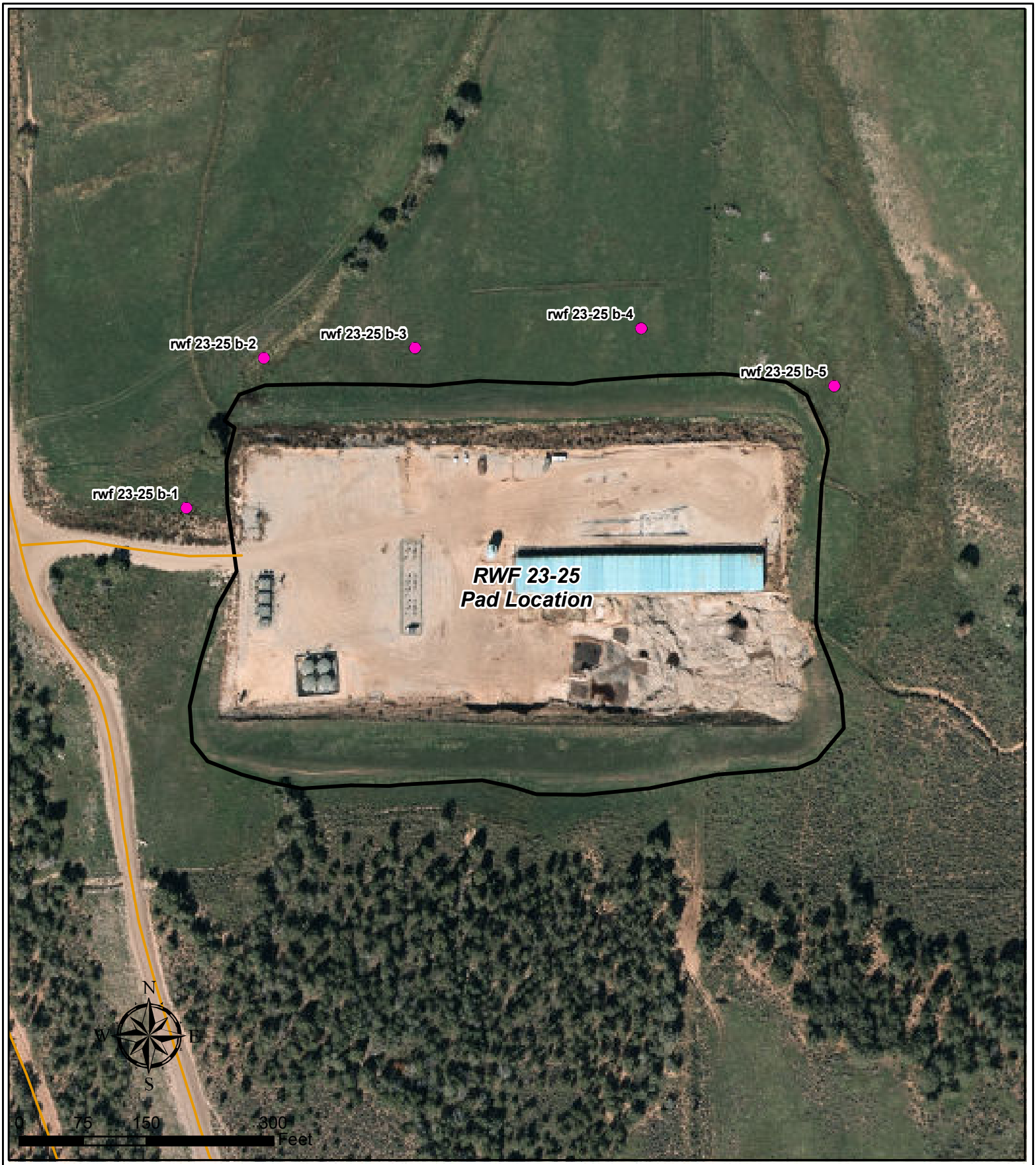

Legend

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

RWF 23-25
Arsenic Background Sample Location Map
T6S R94W, Section 25

May 4, 2015

WPXENERGY

T:\Projects\PIC_MultiProspect\Ongoing\ArsenicSampling\RWF 23-25.mxd mreynold 5/4/2015 11:01:10 AM

16-Apr-2015

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

Re: **RWF 23-25 Cuttings** Work Order: **1504673**

Dear Karolina,

ALS Environmental received 1 sample on 11-Apr-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 21.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 16-Apr-15

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
Work Order: **1504673**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1504673-01	RWF 23-25 Cuttings	Soil		4/10/2015 08:00	4/11/2015 09:30	☐

ALS Group USA, Corp

Date: 16-Apr-15

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

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

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

ALS Group USA, Corp

Date: *16-Apr-15*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
Work Order: 1504673
Sample ID: RWF 23-25 Cuttings
Lab ID: 1504673-01
Collection Date: 4/10/2015 08:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 4/13/15	Analyst: **IT**
DRO (C10-C28)	**42**		**5.5**	**mg/Kg-dry**	1	4/14/2015 06:19 AM
Surr: 4-Terphenyl-d14	*80.9*		*39-133*	*%REC*	1	4/14/2015 06:19 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**		Prep: SW5035 / 4/13/15	Analyst: **IT**
GRO (C6-C10)	ND		3.3	mg/Kg-dry	1	4/14/2015 12:34 PM
Surr: Toluene-d8	*124*		*50-150*	*%REC*	1	4/14/2015 12:34 PM
MERCURY BY CVAA			**SW7471B**		Prep: SW7471 / 4/14/15	Analyst: **LR**
Mercury	**0.060**		**0.018**	**mg/Kg-dry**	1	4/14/2015 09:03 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 4/14/15	Analyst: **JEC**
Arsenic	**3.9**		**0.48**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
Barium	**7,900**		**4.8**	**mg/Kg-dry**	10	4/15/2015 02:20 PM
Cadmium	ND		0.96	mg/Kg-dry	1	4/15/2015 01:26 PM
Chromium	**9.6**		**0.48**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
Copper	**19**		**0.96**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
Lead	**9.8**		**0.48**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
Nickel	**12**		**0.48**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
Selenium	ND		0.96	mg/Kg-dry	1	4/15/2015 01:26 PM
Silver	ND		0.48	mg/Kg-dry	1	4/15/2015 01:26 PM
Zinc	**52**		**0.96**	**mg/Kg-dry**	1	4/15/2015 01:26 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 4/15/15	Analyst: **JEC**
Calcium	**180**		**5.0**	**mg/Kg**	10	4/15/2015 02:32 PM
Magnesium	**16**		**2.0**	**mg/Kg**	10	4/15/2015 02:32 PM
Sodium	**2,700**		**2.0**	**mg/Kg**	10	4/15/2015 02:32 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 4/15/15	Analyst: **JEC**
Sodium Adsorption Ratio	**51**		**0.010**	**none**	1	4/15/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 4/14/15	Analyst: **RS**
Acenaphthene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Anthracene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Benzo(a)anthracene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Benzo(a)pyrene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Benzo(b)fluoranthene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Benzo(g,h,i)perylene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Benzo(k)fluoranthene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Chrysene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Dibenzo(a,h)anthracene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM

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

ALS Group USA, Corp

Date: *16-Apr-15*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
Work Order: 1504673
Sample ID: RWF 23-25 Cuttings
Lab ID: 1504673-01
Collection Date: 4/10/2015 08:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Fluorene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Indeno(1,2,3-cd)pyrene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Naphthalene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Pyrene	ND		8.8	µg/Kg-dry	1	4/14/2015 10:53 PM
Surr: 2-Fluorobiphenyl	*65.8*		*12-100*	*%REC*	1	4/14/2015 10:53 PM
Surr: 4-Terphenyl-d14	*85.2*		*25-137*	*%REC*	1	4/14/2015 10:53 PM
Surr: Nitrobenzene-d5	*61.2*		*37-107*	*%REC*	1	4/14/2015 10:53 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 4/13/15	Analyst: **AK**
Benzene	**210**		**40**	**µg/Kg-dry**	1	4/14/2015 04:44 PM
Ethylbenzene	ND		40	µg/Kg-dry	1	4/14/2015 04:44 PM
m,p-Xylene	**370**		**80**	**µg/Kg-dry**	1	4/14/2015 04:44 PM
o-Xylene	ND		40	µg/Kg-dry	1	4/14/2015 04:44 PM
Toluene	**510**		**40**	**µg/Kg-dry**	1	4/14/2015 04:44 PM
Xylenes, Total	**360**		**120**	**µg/Kg-dry**	1	4/14/2015 04:44 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-130*	*%REC*	1	4/14/2015 04:44 PM
Surr: 4-Bromofluorobenzene	*97.0*		*70-130*	*%REC*	1	4/14/2015 04:44 PM
Surr: Dibromofluoromethane	*96.2*		*70-130*	*%REC*	1	4/14/2015 04:44 PM
Surr: Toluene-d8	*93.6*		*70-130*	*%REC*	1	4/14/2015 04:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 4/15/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**15**		**0.25**	**mmhos/cm @2**	50	4/15/2015 04:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JB**
Chromium, Trivalent	**9.6**		**0.67**	**mg/Kg-dry**	1	4/15/2015 05:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 4/14/15	Analyst: **MB**
Chromium, Hexavalent	ND		1.3	mg/Kg-dry	1	4/15/2015 04:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**25**		**0.050**	**% of sample**	1	4/13/2015 06:30 PM
PH			**SW9045D**		Prep: EXTRACT / 4/15/15	Analyst: **JRF**
pH	**9.0**			**s.u.**	1	4/15/2015 03:30 PM

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

ALS Group USA, Corp

Date: 16-Apr-15

Client: WPX Energy Rocky Mountain, LLC

QC BATCH REPORT

Work Order: 1504673

Project: RWF 23-25 Cuttings

Batch ID: **69757** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-69757-69757** Units: **mg/Kg** Analysis Date: **4/13/2015 11:49 PM**

Client ID: Run ID: **GC8_150413A** SeqNo: **3224178** Prep Date: **4/13/2015** 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	*1.672*	0	*2*	0	*83.6*	*39-133*	0			

LCS Sample ID: **DLCSS1-69757-69757** Units: **mg/Kg** Analysis Date: **4/14/2015 12:19 PM**

Client ID: Run ID: **GC8_150413A** SeqNo: **3224186** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	190.9	5.0	200	0	95.5	61-109	0			
Surr: 4-Terphenyl-d14	*1.368*	0	*2*	0	*68.4*	*39-133*	0			

MS Sample ID: **1504277-08B MS** Units: **mg/Kg** Analysis Date: **4/14/2015 12:49 PM**

Client ID: Run ID: **GC8_150413A** SeqNo: **3224187** Prep Date: **4/13/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	790	81	322.1	424	114	48-110	0			S
Surr: 4-Terphenyl-d14	*2.744*	0	*3.221*	0	*85.2*	*39-133*	0			

MSD Sample ID: **1504277-08B MSD** Units: **mg/Kg** Analysis Date: **4/14/2015 01:19 AM**

Client ID: Run ID: **GC8_150413A** SeqNo: **3224179** Prep Date: **4/13/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	722.6	81	323	424	92.4	48-110	790	8.91	30	
Surr: 4-Terphenyl-d14	*2.733*	0	*3.23*	0	*84.6*	*39-133*	2.744	*0.416*	*30*	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69759** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-69759-69759** Units: **µg/Kg** Analysis Date: **4/13/2015 12:12 PM**
Client ID: Run ID: **GC9_150413A** SeqNo: **3223360** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*5400*	0	*5000*	0	*108*	*50-150*	0			

LCS Sample ID: **LCS-69759-69759** Units: **µg/Kg** Analysis Date: **4/13/2015 11:47 AM**
Client ID: Run ID: **GC9_150413A** SeqNo: **3223359** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	488900	2,500	500000	0	97.8	70-130	0			
Surr: Toluene-d8	*5031*	0	*5000*	0	*101*	*50-150*	0			

MS Sample ID: **1504568-01B MS** Units: **µg/Kg** Analysis Date: **4/13/2015 03:33 PM**
Client ID: Run ID: **GC9_150413A** SeqNo: **3223367** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	447200	2,500	500000	0	89.4	70-130	0			
Surr: Toluene-d8	*3900*	0	*5000*	0	*78*	*50-150*	0			

MSD Sample ID: **1504568-01B MSD** Units: **µg/Kg** Analysis Date: **4/13/2015 03:58 PM**
Client ID: Run ID: **GC9_150413A** SeqNo: **3223368** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	450900	2,500	500000	0	90.2	70-130	447200	0.812	30	
Surr: Toluene-d8	*4034*	0	*5000*	0	*80.7*	*50-150*	3900	*3.37*	*30*	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69820** Instrument ID **HG1** Method: **SW7471B**

MBLK Sample ID: **MBLK-69820-69820** Units: **mg/Kg** Analysis Date: **4/14/2015 08:28 PM**
Client ID: Run ID: **HG1_150414A** SeqNo: **3226261** Prep Date: **4/14/2015** 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-69820-69820** Units: **mg/Kg** Analysis Date: **4/14/2015 08:30 PM**
Client ID: Run ID: **HG1_150414A** SeqNo: **3226262** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1882	0.020	0.1665	0	113	80-120	0			

MS Sample ID: **1504650-02AMS** Units: **mg/Kg** Analysis Date: **4/14/2015 08:56 PM**
Client ID: Run ID: **HG1_150414A** SeqNo: **3226273** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1229	0.012	0.1027	0.005053	115	75-125	0			

MSD Sample ID: **1504650-02AMSD** Units: **mg/Kg** Analysis Date: **4/14/2015 08:58 PM**
Client ID: Run ID: **HG1_150414A** SeqNo: **3226274** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1244	0.013	0.1044	0.005053	114	75-125	0.1229	1.24	35	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69798** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1504674-01ADUP** Units: **mg/Kg** Analysis Date: **4/15/2015 02:43 PM**
Client ID: Run ID: **ICP2_150415A** SeqNo: **3226954** Prep Date: **4/15/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	124.1	5.0	0	0	0	0-0	151	19.6		
Magnesium	2.199	2.0	0	0	0	0-0	2.762	22.7		
Sodium	1637	2.0	0	0	0	0-0	1842	11.8		

DUP Sample ID: **1504674-01ADUP** Units: **none** Analysis Date: **4/15/2015**
Client ID: Run ID: **SAR_150415A** SeqNo: **3227021** Prep Date: **4/15/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	39.89	0.010	0	0	0		40.68	1.97	50	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69821** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-69821-69821** Units: **mg/L** Analysis Date: **4/15/2015 12:52 PM**
Client ID: Run ID: **ICP2_150415A** SeqNo: **3226778** Prep Date: **4/14/2015** 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	0.009148	0.25								J
Copper	ND	0.50								
Lead	0.03665	0.25								J
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-69821-69821** Units: **mg/L** Analysis Date: **4/15/2015 12:58 PM**
Client ID: Run ID: **ICP2_150415A** SeqNo: **3226779** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.973	0.25	5	0	99.5	80-120	0			
Barium	4.909	0.25	5	0	98.2	80-120	0			
Cadmium	4.845	0.50	5	0	96.9	80-120	0			
Chromium	5.078	0.25	5	0	102	80-120	0			
Copper	5.078	0.50	5	0	102	80-120	0			
Lead	5.218	0.25	5	0	104	80-120	0			
Nickel	5.116	0.25	5	0	102	80-120	0			
Selenium	5.049	0.50	5	0	101	80-120	0			
Silver	5.5	0.25	5	0	110	80-120	0			
Zinc	5.011	0.50	5	0	100	80-120	0			

MS Sample ID: **1504646-01BMS** Units: **mg/Kg** Analysis Date: **4/15/2015 01:09 PM**
Client ID: Run ID: **ICP2_150415A** SeqNo: **3226781** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	18.43	0.39	7.862	9.581	112	75-125	0			
Barium	171.6	0.39	7.862	159.6	152	75-125	0			SO
Cadmium	7.898	0.79	7.862	0.2266	97.6	75-125	0			
Chromium	21.4	0.39	7.862	11.35	128	75-125	0			S
Copper	33.48	0.79	7.862	26.37	90.4	75-125	0			
Lead	18.38	0.39	7.862	11.04	93.5	75-125	0			
Nickel	27.06	0.39	7.862	19.84	91.8	75-125	0			
Selenium	7.764	0.79	7.862	-0.9131	110	75-125	0			
Silver	9.789	0.39	7.862	-0.1719	127	75-125	0			S
Zinc	75.34	0.79	7.862	67.04	106	75-125	0			O

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69821** Instrument ID **ICP2** Method: **SW846 6010C**

MSD Sample ID: **1504646-01BMSD** Units: **mg/Kg** Analysis Date: **4/15/2015 01:15 PM**
Client ID: Run ID: **ICP2_150415A** SeqNo: **3226782** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	18.81	0.40	7.937	9.581	116	75-125	18.43	2.05	20	
Barium	172.9	0.40	7.937	159.6	168	75-125	171.6	0.804	20	SO
Cadmium	8.191	0.79	7.937	0.2266	100	75-125	7.898	3.64	20	
Chromium	22.31	0.40	7.937	11.35	138	75-125	21.4	4.15	20	S
Copper	35.34	0.79	7.937	26.37	113	75-125	33.48	5.41	20	
Lead	18.91	0.40	7.937	11.04	99.2	75-125	18.38	2.83	20	
Nickel	28.39	0.40	7.937	19.84	108	75-125	27.06	4.79	20	
Selenium	7.823	0.79	7.937	-0.9131	110	75-125	7.764	0.761	20	
Silver	10.03	0.40	7.937	-0.1719	128	75-125	9.789	2.4	20	S
Zinc	78.76	0.79	7.937	67.04	148	75-125	75.34	4.44	20	SO

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69802** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-69802-69802** Units: **µg/Kg** Analysis Date: **4/14/2015 05:02 PM**
Client ID: Run ID: **SVMS4_150414A** SeqNo: **3225404** Prep Date: **4/14/2015** 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								
Surr: 2-Fluorobiphenyl	*1362*	0	*1667*	0	*81.7*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1976*	0	*1667*	0	*119*	*25-137*	0			
Surr: Nitrobenzene-d5	*1339*	0	*1667*	0	*80.3*	*37-107*	0			

LCS Sample ID: **SLCSS1-69802-69802** Units: **µg/Kg** Analysis Date: **4/14/2015 05:27 PM**
Client ID: Run ID: **SVMS4_150414A** SeqNo: **3225408** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	509.3	6.7	666.7	0	76.4	45-110	0			
Anthracene	581	6.7	666.7	0	87.1	55-105	0			
Benzo(a)anthracene	580	6.7	666.7	0	87	50-110	0			
Benzo(a)pyrene	624.3	6.7	666.7	0	93.6	50-110	0			
Benzo(b)fluoranthene	613	6.7	666.7	0	91.9	45-115	0			
Benzo(g,h,i)perylene	684.7	6.7	666.7	0	103	40-125	0			
Benzo(k)fluoranthene	582.7	6.7	666.7	0	87.4	45-115	0			
Chrysene	586.3	6.7	666.7	0	87.9	55-110	0			
Dibenzo(a,h)anthracene	655.3	6.7	666.7	0	98.3	40-125	0			
Fluoranthene	631.3	6.7	666.7	0	94.7	55-115	0			
Fluorene	527	6.7	666.7	0	79	50-110	0			
Indeno(1,2,3-cd)pyrene	695.7	6.7	666.7	0	104	40-120	0			
Naphthalene	475.3	6.7	666.7	0	71.3	40-105	0			
Pyrene	669.7	6.7	666.7	0	100	45-125	0			
Surr: 2-Fluorobiphenyl	*1326*	0	*1667*	0	*79.6*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1759*	0	*1667*	0	*106*	*25-137*	0			
Surr: Nitrobenzene-d5	*1383*	0	*1667*	0	*83*	*37-107*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69802** Instrument ID **SVMS4** Method: **SW846 8270D**

MS Sample ID: **1504507-01B MS** Units: **µg/Kg** Analysis Date: **4/14/2015 07:56 PM**
Client ID: Run ID: **SVMS4_150414A** SeqNo: **3226509** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1497	18	1835	0	81.6	45-110	0			
Anthracene	1672	18	1835	0	91.1	55-105	0			
Benzo(a)anthracene	1617	18	1835	0	88.1	50-110	0			
Benzo(a)pyrene	1729	18	1835	0	94.2	50-110	0			
Benzo(b)fluoranthene	1721	18	1835	0	93.8	45-115	0			
Benzo(g,h,i)perylene	1928	18	1835	0	105	40-125	0			
Benzo(k)fluoranthene	1662	18	1835	0	90.6	45-115	0			
Chrysene	1624	18	1835	0	88.5	55-110	0			
Dibenzo(a,h)anthracene	1827	18	1835	0	99.5	40-125	0			
Fluoranthene	1800	18	1835	0	98.1	55-115	0			
Fluorene	1559	18	1835	0	84.9	50-110	0			
Indeno(1,2,3-cd)pyrene	1952	18	1835	0	106	40-120	0			
Naphthalene	1290	18	1835	0	70.3	40-105	0			
Pyrene	1817	18	1835	0	99	45-125	0			
Surr: 2-Fluorobiphenyl	*3843*	0	*4587*	0	*83.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*4725*	0	*4587*	0	*103*	*25-137*	0			
Surr: Nitrobenzene-d5	*3512*	0	*4587*	0	*76.6*	*37-107*	0			

MSD Sample ID: **1504507-01B MSD** Units: **µg/Kg** Analysis Date: **4/14/2015 08:22 PM**
Client ID: Run ID: **SVMS4_150414A** SeqNo: **3226510** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1431	19	1892	0	75.6	45-110	1497	4.53	30	
Anthracene	1665	19	1892	0	88	55-105	1672	0.369	30	
Benzo(a)anthracene	1559	19	1892	0	82.4	50-110	1617	3.71	30	
Benzo(a)pyrene	1667	19	1892	0	88.1	50-110	1729	3.65	30	
Benzo(b)fluoranthene	1675	19	1892	0	88.5	45-115	1721	2.72	30	
Benzo(g,h,i)perylene	1851	19	1892	0	97.8	40-125	1928	4.11	30	
Benzo(k)fluoranthene	1576	19	1892	0	83.3	45-115	1662	5.36	30	
Chrysene	1530	19	1892	0	80.9	55-110	1624	5.94	30	
Dibenzo(a,h)anthracene	1776	19	1892	0	93.9	40-125	1827	2.81	30	
Fluoranthene	1728	19	1892	0	91.3	55-115	1800	4.09	30	
Fluorene	1527	19	1892	0	80.7	50-110	1559	2.03	30	
Indeno(1,2,3-cd)pyrene	1895	19	1892	0	100	40-120	1952	2.97	30	
Naphthalene	1263	19	1892	0	66.7	40-105	1290	2.15	30	
Pyrene	1732	19	1892	0	91.5	45-125	1817	4.84	30	
Surr: 2-Fluorobiphenyl	*3725*	0	*4729*	0	*78.8*	*12-100*	3843	*3.12*	*40*	
Surr: 4-Terphenyl-d14	*4626*	0	*4729*	0	*97.8*	*25-137*	4725	*2.1*	*40*	
Surr: Nitrobenzene-d5	*3643*	0	*4729*	0	*77*	*37-107*	3512	*3.66*	*40*	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69762** Instrument ID **VMS7** Method: **SW8260B**

MBLK Sample ID: **MBLK-69762-69762** Units: **µg/Kg** Analysis Date: **4/13/2015 01:22 PM**
Client ID: Run ID: **VMS7_150413A** SeqNo: **3224221** Prep Date: **4/13/2015** 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	*886.5*	0	*1000*	0	*88.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1011*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*921.5*	0	*1000*	0	*92.2*	*70-130*	0			
Surr: Toluene-d8	*990*	0	*1000*	0	*99*	*70-130*	0			

LCS Sample ID: **LCS-69762-69762** Units: **µg/Kg** Analysis Date: **4/13/2015 09:51 AM**
Client ID: Run ID: **VMS7_150413A** SeqNo: **3224220** Prep Date: **4/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1174	30	1000	0	117	75-125	0			
Ethylbenzene	1120	30	1000	0	112	75-125	0			
m,p-Xylene	2220	60	2000	0	111	80-125	0			
o-Xylene	1108	30	1000	0	111	75-125	0			
Toluene	1140	30	1000	0	114	70-125	0			
Xylenes, Total	3328	90	3000	0	111	75-125	0			
Surr: 1,2-Dichloroethane-d4	*873*	0	*1000*	0	*87.3*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1008*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*939.5*	0	*1000*	0	*94*	*70-130*	0			
Surr: Toluene-d8	*977*	0	*1000*	0	*97.7*	*70-130*	0			

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69798** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

Dup Sample ID: **1504674-01A Dup** Units: **mmhos/cm @25°** Analysis Date: **4/15/2015 04:30 PM**

Client ID: Run ID: **WETCHEM_150415M** SeqNo: **3227144** Prep Date: **4/15/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	9.38	0.050	0	0	0		10.24	8.77	50	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69857** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-69857-69857** Units: **s.u.** Analysis Date: **4/15/2015 03:30 PM**
Client ID: Run ID: **WETCHEM_150415P** SeqNo: **3227211** Prep Date: **4/15/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.01	0	4	0	100	90-110	0			

DUP Sample ID: **1504673-01A DUP** Units: **s.u.** Analysis Date: **4/15/2015 03:30 PM**
Client ID: **RWF 23-25 Cuttings** Run ID: **WETCHEM_150415P** SeqNo: **3227213** Prep Date: **4/15/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.97	0	0	0	0	0-0	9	0.334	20	

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **69892** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-69892-69892** Units: **mg/Kg** Analysis Date: **4/15/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150415O** SeqNo: **3227202** Prep Date: **4/14/2015** 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-69892-69892** Units: **mg/Kg** Analysis Date: **4/15/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150415O** SeqNo: **3227203** Prep Date: **4/14/2015** 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: **1504674-01A MS** Units: **mg/Kg** Analysis Date: **4/15/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150415O** SeqNo: **3227206** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.333	0.95	4.762	0.2336	44.1	75-125	0			S

MS Sample ID: **1504674-01A MSI** Units: **mg/Kg** Analysis Date: **4/15/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150415O** SeqNo: **3227208** Prep Date: **4/14/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1793	99	1928	0.2336	93	75-125	0			

MSD Sample ID: **1504674-01A MSD** Units: **mg/Kg** Analysis Date: **4/15/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150415O** SeqNo: **3227207** Prep Date: **4/14/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.6275	0.98	4.902	0.2336	8.03	75-125	2.333	0	20	JS

The following samples were analyzed in this batch: 1504673-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1504673
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **R161268** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R161268** Units: **% of sample** Analysis Date: **4/13/2015 06:30 PM**
Client ID: Run ID: **MOIST_150413D** SeqNo: **3224738** 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-R161268** Units: **% of sample** Analysis Date: **4/13/2015 06:30 PM**
Client ID: Run ID: **MOIST_150413D** SeqNo: **3224736** 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: **1504276-01B DUP** Units: **% of sample** Analysis Date: **4/13/2015 06:30 PM**
Client ID: Run ID: **MOIST_150413D** SeqNo: **3224701** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.84	0.050	0	0	0		10.71	1.21	20	

DUP Sample ID: **1504513-01B DUP** Units: **% of sample** Analysis Date: **4/13/2015 06:30 PM**
Client ID: Run ID: **MOIST_150413D** SeqNo: **3224717** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	16.79	0.050	0	0	0		17.07	1.65	20	

The following samples were analyzed in this batch: 1504673-01A

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER # 1504673

PAGE 1 of 1

PROJECT NAME	RWF 23-25 cuttings	SAMPLER		DATE	
PROJECT No.		SITE ID	RWF 23-25 cuttings	TURNAROUND	3 day
		EDD FORMAT		DISPOSAL	By Lab or Return to Client
COMPANY NAME	WPX Energy	PURCHASE ORDER			
SEND REPORT TO	Blaney	BILL TO COMPANY	WPX Energy		
ADDRESS		INVOICE ATTN TO	Karolina Blaney; Leo Braun		
CITY / STATE / ZIP		ADDRESS	1058 Co Rd 215		
PHONE		CITY / STATE / ZIP	Parachure CO 81635		
FAX		PHONE	970-683-2295		
E-MAIL	Karolina.blaney@wpxenergy.com;	FAX			
		E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	910-1
1	RWF 23-25 cuttings	S	4/10/2015	8:00	1			x

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

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
3.0°C @	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	4/10/2015	2:45
RECEIVED BY			4-10	2:850
RELINQUISHED BY			4-10-15	3:00
RECEIVED BY		Diane F. Sha	4/11/15	0930
RELINQUISHED BY				
RECEIVED BY				

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

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J15121502303uv

Ship Date: 10APR15
ActWgt: 45.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 041015-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

5 of 5

SATURDAY 12:00P
PRIORITY OVERNIGHT

MPS# 7733 4644 8662
0263

Mstr# 7733 4644 8320 0201

X0 HLMA

49424
MI-US
GRR

537J2/6FC5/EE4B

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

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

LS Parachute Custody Seal
me 1720 Date 4-10-15
me

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **11-Apr-15 09:30**

Work Order: **1504673** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 13-Apr-15 (Date) Reviewed by: Chad Whelton (eSignature) 13-Apr-15 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.0 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	4/13/2015 9:41:27 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

29-Apr-2015

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

Re: **RWF 23-25 Cuttings** Work Order: **15041612**

Dear Karolina,

ALS Environmental received 1 sample on 28-Apr-2015 10:15 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 9.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 29-Apr-15

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
Work Order: **15041612**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
15041612-01	RWF 23-25 cuttings	Soil		4/27/2015 10:30	4/28/2015 10:15	☐

ALS Group USA, Corp

Date: 29-Apr-15

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
WorkOrder: **15041612**

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight

ALS Group USA, Corp

Date: *29-Apr-15*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Cuttings
Work Order: 15041612
Sample ID: RWF 23-25 cuttings
Lab ID: 15041612-01
Collection Date: 4/27/2015 10:30 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 4/28/15	Analyst: **AK**
Benzene	**170**		**36**	**µg/Kg-dry**	1	4/29/2015 02:17 AM
Surr: 1,2-Dichloroethane-d4	*95.3*		*70-130*	*%REC*	1	4/29/2015 02:17 AM
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	1	4/29/2015 02:17 AM
Surr: Dibromofluoromethane	*91.6*		*70-130*	*%REC*	1	4/29/2015 02:17 AM
Surr: Toluene-d8	*99.7*		*70-130*	*%REC*	1	4/29/2015 02:17 AM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**17**		**0.050**	**% of sample**	1	4/28/2015 04:40 PM

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

ALS Group USA, Corp

Date: 29-Apr-15

Client: WPX Energy Rocky Mountain, LLC

Work Order: 15041612

Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **70404** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-70404-70404** Units: **µg/Kg** Analysis Date: **4/29/2015 01:00 AM**

Client ID: Run ID: **VMS5_150428A** SeqNo: **3248219** Prep Date: **4/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Surr: 1,2-Dichloroethane-d4	*1008*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*996*	0	*1000*	0	*99.6*	*70-130*	0			
Surr: Dibromofluoromethane	*1012*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1016*	0	*1000*	0	*102*	*70-130*	0			

LCS Sample ID: **LCS-70404-70404** Units: **µg/Kg** Analysis Date: **4/28/2015 11:44 PM**

Client ID: Run ID: **VMS5_150428A** SeqNo: **3248209** Prep Date: **4/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1003	30	1000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1007*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*966*	0	*1000*	0	*96.6*	*70-130*	0			
Surr: Dibromofluoromethane	*1010*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*983.5*	0	*1000*	0	*98.4*	*70-130*	0			

The following samples were analyzed in this batch: 15041612-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15041612
Project: RWF 23-25 Cuttings

QC BATCH REPORT

Batch ID: **R162311** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R162311** Units: **% of sample** Analysis Date: **4/28/2015 04:40 PM**
Client ID: Run ID: **MOIST_150428B** SeqNo: **3248800** 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-R162311** Units: **% of sample** Analysis Date: **4/28/2015 04:40 PM**
Client ID: Run ID: **MOIST_150428B** SeqNo: **3248798** 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: **15041420-16B DUP** Units: **% of sample** Analysis Date: **4/28/2015 04:40 PM**
Client ID: Run ID: **MOIST_150428B** SeqNo: **3248771** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.31	0.050	0	0	0		13.66	10.4	20	

DUP Sample ID: **15041510-03B DUP** Units: **% of sample** Analysis Date: **4/28/2015 04:40 PM**
Client ID: Run ID: **MOIST_150428B** SeqNo: **3248785** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.54	0.050	0	0	0		13.86	4.79	20	

The following samples were analyzed in this batch: 15041612-01A

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER #	1504612						
PAGE	1 of 1						
DISPOSAL	By Lab or Return to Client						
TURNAROUND	24 hrs						
DATE							
SAMPLER							
PROJECT NAME	RWF 23-25 cuttings	SITE ID	RWF 23-25 cuttings				
PROJECT No.		EDD FORMAT					
		PURCHASE ORDER					
COMPANY NAME	WPX Energy	BILL TO COMPANY	WPX Energy				
SEND REPORT TO	Blaney	INVOICE ATTN TO	Karolina Blaney; Leo Braun				
ADDRESS		ADDRESS	1058 Co Rd 215				
CITY / STATE / ZIP		CITY / STATE / ZIP	Parachure CO 81635				
PHONE		PHONE	970-683-2295				
FAX		FAX					
E-MAIL	Karolina.blaney@wpxenergy.com;	E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com				

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	benzene
	RWF 23-25 cuttings	S	4/27/2015	10:30	1			x

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

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
2.4c @	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	4/27/2015	16:00
RECEIVED BY			4-27	1700
RELINQUISHED BY			4-27	1700
RECEIVED BY		Joe Rioux	4/28/15	1015
RELINQUISHED BY				
RECEIVED BY				

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

PARACHUTE, CO 81635

Origin ID: RILA

J151215022303uv

Ship Date: 27APR15
ActWgt: 75.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 042715-2
Invoice #
PO # Parachute
Dept #

BILL SENDER

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

HOLLAND, MI 49424

4 of 4

MPS# 7734 6827 9012

Mstr# 7734 6827 9273

TUE - 28 APR 10:30A
PRIORITY OVERNIGHT

49424
MI-US
GRR

XX HLMA

537J1/25E2/EE46

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

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

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **28-Apr-15 10:15**

Work Order: **15041612** Received by: **JR**

Checklist completed by Joseph Ribar (eSignature) 28-Apr-15 (Date) Reviewed by: Chad Whelton (eSignature) 28-Apr-15 (Date)

Matrices: soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4C	sr2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	4/28/2015 11:53:32 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

08-May-2015

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

Re: **RWF 23-25 Backgrounds** Work Order: **1505046**

Dear Karolina,

ALS Environmental received 5 samples on 01-May-2015 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 16.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 08-May-15

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Backgrounds
Work Order: **1505046**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1505046-01	RWF 23-25-B-1	Soil		4/28/2015 12:10	5/1/2015 10:00	☐
1505046-02	RWF 23-25-B-2	Soil		4/28/2015 12:15	5/1/2015 10:00	☐
1505046-03	RWF 23-25-B-3	Soil		4/28/2015 12:20	5/1/2015 10:00	☐
1505046-04	RWF 23-25-B-4	Soil		4/28/2015 12:25	5/1/2015 10:00	☐
1505046-05	RWF 23-25-B-5	Soil		4/28/2015 12:30	5/1/2015 10:00	☐

ALS Group USA, Corp

Date: 08-May-15

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

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

Units Reported	Description
% of sample	Percent of Sample
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: *08-May-15*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Backgrounds
Work Order: 1505046
Sample ID: RWF 23-25-B-1
Lab ID: 1505046-01
Collection Date: 4/28/2015 12:10 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 5/4/15	Analyst: **JEC**
Arsenic	**6.7**		**0.40**	**mg/Kg-dry**	1	5/5/2015 01:55 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**5.8**		**0.050**	**% of sample**	1	5/6/2015 05:45 PM

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

ALS Group USA, Corp

Date: *08-May-15*

Client:	WPX Energy Rocky Mountain, LLC		
Project:	RWF 23-25 Backgrounds	**Work Order:**	1505046
Sample ID:	RWF 23-25-B-2	**Lab ID:**	1505046-02
Collection Date:	4/28/2015 12:15 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 5/4/15	Analyst: **JEC**
Arsenic	**7.4**		**0.53**	**mg/Kg-dry**	1	5/5/2015 02:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**23**		**0.050**	**% of sample**	1	5/6/2015 05:45 PM

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

ALS Group USA, Corp

Date: *08-May-15*

Client:	WPX Energy Rocky Mountain, LLC		
Project:	RWF 23-25 Backgrounds	**Work Order:**	1505046
Sample ID:	RWF 23-25-B-3	**Lab ID:**	1505046-03
Collection Date:	4/28/2015 12:20 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 5/4/15	Analyst: **JEC**
Arsenic	**6.9**		**0.51**	**mg/Kg-dry**	1	5/5/2015 02:06 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**24**		**0.050**	**% of sample**	1	5/6/2015 05:45 PM

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

ALS Group USA, Corp

Date: *08-May-15*

Client:	WPX Energy Rocky Mountain, LLC		
Project:	RWF 23-25 Backgrounds	**Work Order:**	1505046
Sample ID:	RWF 23-25-B-4	**Lab ID:**	1505046-04
Collection Date:	4/28/2015 12:25 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 5/4/15	Analyst: **JEC**
Arsenic	**5.1**		**0.50**	**mg/Kg-dry**	1	5/5/2015 02:12 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**19**		**0.050**	**% of sample**	1	5/6/2015 05:45 PM

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

ALS Group USA, Corp

Date: *08-May-15*

Client: WPX Energy Rocky Mountain, LLC
Project: RWF 23-25 Backgrounds
Work Order: 1505046
Sample ID: RWF 23-25-B-5
Lab ID: 1505046-05
Collection Date: 4/28/2015 12:30 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 5/4/15	Analyst: **JEC**
Arsenic	**6.0**		**0.50**	**mg/Kg-dry**	1	5/5/2015 02:18 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 5/5/15	Analyst: **JEC**
Calcium	**140**		**5.0**	**mg/L**	10	5/5/2015 12:09 PM
Magnesium	**26**		**2.0**	**mg/L**	10	5/5/2015 12:09 PM
Sodium	**9.3**		**2.0**	**mg/L**	10	5/5/2015 12:09 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 5/5/15	Analyst: **JEC**
Sodium Adsorption Ratio	**0.19**		**0.010**	**none**	1	5/5/2015
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 5/5/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**1.2**		**0.050**	**mmhos/cm @2**	10	5/5/2015 06:50 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**23**		**0.050**	**% of sample**	1	5/6/2015 05:45 PM
PH			**SW9045D**		Prep: EXTRACT / 5/5/15	Analyst: **JB**
pH	**8.0**			**s.u.**	1	5/5/2015 06:00 PM

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

ALS Group USA, Corp

Date: 08-May-15

Client: WPX Energy Rocky Mountain, LLC

QC BATCH REPORT

Work Order: 1505046

Project: RWF 23-25 Backgrounds

Batch ID: **70580** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1505048-05ADUP** Units: **mg/L** Analysis Date: **5/5/2015 12:26 PM**

Client ID: Run ID: **ICP2_150505A** SeqNo: **3258724** Prep Date: **5/5/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	213	5.0	0	0	0	0-0	185.2	14		
Magnesium	20.05	2.0	0	0	0	0-0	17.5	13.6		
Sodium	4.319	2.0	0	0	0	0-0	3.801	12.8		

DUP Sample ID: **1505048-05ADUP** Units: **none** Analysis Date: **5/5/2015**

Client ID: Run ID: **SAR_150505B** SeqNo: **3258890** Prep Date: **5/5/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.07581	0.010	0	0	0		0.07153	5.81	50	

The following samples were analyzed in this batch: 1505046-05A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1505046
Project: RWF 23-25 Backgrounds

QC BATCH REPORT

Batch ID: **70634** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-70634-70634** Units: **mg/L** Analysis Date: **5/5/2015 09:42 AM**
Client ID: Run ID: **ICP2_150505A** SeqNo: **3258373** Prep Date: **5/4/2015** DF: **1**

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

LCS Sample ID: **LCS-70634-70634** Units: **mg/L** Analysis Date: **5/5/2015 09:48 AM**
Client ID: Run ID: **ICP2_150505A** SeqNo: **3258375** Prep Date: **5/4/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.037	0.25	5	0	101	80-120	0			

MS Sample ID: **1505054-01BMS** Units: **mg/Kg** Analysis Date: **5/5/2015 10:04 AM**
Client ID: Run ID: **ICP2_150505A** SeqNo: **3258387** Prep Date: **5/4/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.34	0.38	7.657	5.263	105	75-125	0			

MSD Sample ID: **1505054-01BMSD** Units: **mg/Kg** Analysis Date: **5/5/2015 10:10 AM**
Client ID: Run ID: **ICP2_150505A** SeqNo: **3258389** Prep Date: **5/4/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.71	0.39	7.825	5.263	108	75-125	13.34	2.74	20	

The following samples were analyzed in this batch:

1505046-01A	1505046-02A	1505046-03A
1505046-04A	1505046-05A	

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1505046
Project: RWF 23-25 Backgrounds

QC BATCH REPORT

Batch ID: **70580** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **1505048-05A DUP** Units: **mmhos/cm @25°** Analysis Date: **5/5/2015 06:50 PM**
Client ID: Run ID: **WETCHEM_150505K** SeqNo: **3259681** Prep Date: **5/5/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.316	0.050	0	0	0		1.208	8.56	50	

The following samples were analyzed in this batch: 1505046-05A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1505046
Project: RWF 23-25 Backgrounds

QC BATCH REPORT

Batch ID: **70690** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-70690-70690** Units: **s.u.** Analysis Date: **5/5/2015 06:00 PM**
Client ID: Run ID: **WETCHEM_150505L** SeqNo: **3259688** Prep Date: **5/5/2015** DF: **1**

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

DUP Sample ID: **15041768-03A DUP** Units: **s.u.** Analysis Date: **5/5/2015 06:00 PM**
Client ID: Run ID: **WETCHEM_150505L** SeqNo: **3259692** Prep Date: **5/5/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.03	0	0	0	0	0-0	8.17	1.73	20	

DUP Sample ID: **15041768-11A DUP** Units: **s.u.** Analysis Date: **5/5/2015 06:00 PM**
Client ID: Run ID: **WETCHEM_150505L** SeqNo: **3259701** Prep Date: **5/5/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.01	0	0	0	0	0-0	8.01	0	20	

The following samples were analyzed in this batch: 1505046-05A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1505046
Project: RWF 23-25 Backgrounds

QC BATCH REPORT

Batch ID: **R162890** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R162890** Units: **% of sample** Analysis Date: **5/6/2015 05:45 PM**
Client ID: Run ID: **MOIST_150506B** SeqNo: **3263709** 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-R162890** Units: **% of sample** Analysis Date: **5/6/2015 05:45 PM**
Client ID: Run ID: **MOIST_150506B** SeqNo: **3263708** 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: **1505007-21C DUP** Units: **% of sample** Analysis Date: **5/6/2015 05:45 PM**
Client ID: Run ID: **MOIST_150506B** SeqNo: **3263681** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	17.39	0.050	0	0	0		15.47	11.7	20	

DUP Sample ID: **1505046-02A DUP** Units: **% of sample** Analysis Date: **5/6/2015 05:45 PM**
Client ID: **RWF 23-25-B-2** Run ID: **MOIST_150506B** SeqNo: **3263695** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.35	0.050	0	0	0		23.48	4.93	20	

The following samples were analyzed in this batch:

1505046-01A	1505046-02A	1505046-03A
1505046-04A	1505046-05A	

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER # 1505046

PAGE 1 of 1

PROJECT NAME	RWF 23-25 backgrounds	SAMPLER		DATE	
PROJECT No.		SITE ID	RWF 23-25 backgrounds	TURNAROUND	5 day
		EDD FORMAT		DISPOSAL	By Lab or Return to Client
COMPANY NAME	WPX Energy	PURCHASE ORDER			
SEND REPORT TO	Blaney	BILL TO COMPANY	WPX Energy		
ADDRESS		INVOICE ATTN TO	Karolina Blaney; Leo Braun		
CITY / STATE / ZIP		ADDRESS	1058 Co Rd 215		
PHONE		CITY / STATE / ZIP	Parachure CO 81635		
FAX		PHONE	970-683-2295		
E-MAIL	Karolina.blaney@wpxenergy.com;	FAX			
		E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic	SAR, EC, pH
1	RWF 23-25-B-1	S	4/28/2015	12:10	1		x	x	
2	RWF 23-25-B-2	S	4/28/2015	12:15	1		x	x	
3	RWF 23-25-B-3	S	4/28/2015	12:20	1		x	x	
4	RWF 23-25-B-4	S	4/28/2015	12:25	1		x	x	
5	RWF 23-25-B-5	S	4/28/2015	12:30	1		x	x	x

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

For metals or anions, please detail analytes below.

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	4/30/2015	12:00
RECEIVED BY			4-30	1640
RELINQUISHED BY				
RECEIVED BY			05/01/15	1000
RELINQUISHED BY				
RECEIVED BY				

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

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J151215022303uv

Ship Date: 30APR15
ActWgt: 64.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 043015-4
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070 BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

3 of 3

MPS# 7735 0198 1150

0263

Mstr# 7735 0198 1242 0201

FRI - 01 MAY 10:30A
PRIORITY OVERNIGHT

49424
MI-US
GRR

XX HLMA

537J1/25E2/EE4B

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

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Time 1720 Date 4-30
Name

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **01-May-15 10:00**

Work Order: **1505046** Received by: **TBB**

Checklist completed by Diane Shaw (eSignature) 01-May-15 (Date) Reviewed by: Chad Whitton (eSignature) 01-May-15 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.2 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	5/1/2015 2:02:32 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: