



Heather Patterson
Environmental Specialist
NMOCD District II

December 16, 2016

Re: RDU 61 workplan for the characterization of impacts – Case # 3989

Dear Ms. Patterson,

The purpose of this letter is to propose a workplan for the characterization of impacts associated with the RDU 61 produced water and oil spill which occurred on October 30, 2016.

The impacted area was sampled on 10/31/2016; two grab samples were collected from the pad's surface. The map of the impacted area along with the two sample locations and the laboratory report are included as an attachment. The results are summarized below:

Location	DRO (mg/kg)	GRO (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Chlorides (mg/kg)
RDU 61-1	120	ND	ND	ND	ND	ND	38000
RDU 61-2	38	ND	ND	ND	0.063	ND	1300

The organic compounds tested below the OCD cleanup threshold. However, the chloride concentrations are exceeding the preferred cleanup concentration of 1000 mg/kg. WPX proposes to delineate the salt impacts by excavating potholes and screening soil at various depths until salt concentrations screen below 1000 mg/kg. Two potholes will be excavated from the impacted area near the two sampling points to delineate vertical extent of the salt impacts. Additional potholes will be excavated along the perimeter of the impacted area to delineate the horizontal extent of the impacts. All samples will be screened utilizing titration strips. Once the characterization is completed, WPX will submit the results to OCD along with a cleanup plan for prior approval.

WPX will start the delineation activities upon the approval of this request.

Please do not hesitate to call me if you have any questions.

Sincerely,

Karolina Blaney
WPX Energy
Environmental Specialist
(970) 589-0743
karolina.blaney@wpxenergy.com



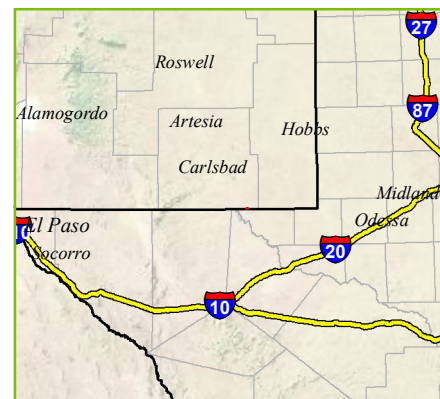
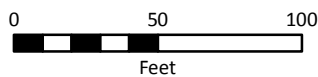
RDU 61
Permian Basin



Date: 11/3/2016
Map Scale (at 8.5" x 11"): 1:800
Projection: NAD 1927 UTM Zone 13N
Created By: Jeremy Andarakes
Planning Project Specialist II
3500 One Williams Center
Tulsa, OK 74172

Map Symbolology

- WPX Well - Producing
- ★ Point of Interest
- Area of Interest





08-Nov-2016

Karolina Blaney
WPX Energy
5315 Buena Vista Dr.
Carlsbad, NM 88220

Re: **RDU 61**

Work Order: **1611015**

Dear Karolina,

ALS Environmental received 2 samples on 01-Nov-2016 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 13.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 998501

Report of Laboratory Analysis

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

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Environmental The ALS logo, a stylized blue triangle with a yellow flame-like shape inside.

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy
Project: RDU 61
Work Order: 1611015

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>
1611015-01	RDU 61 #1	Soil		10/31/2016 11:30	11/1/2016 09:30	☐
1611015-02	RDU 61 #2	Soil		11/1/2016 11:40	11/1/2016 09:30	☐

Client: WPX Energy

Project: RDU 61

WorkOrder: 1611015

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 Reporting Limit, 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

Date: 08-Nov-16

Client: WPX Energy
Project: RDU 61
Sample ID: RDU 61 #1
Collection Date: 10/31/2016 11:30 AM

Work Order: 1611015
Lab ID: 1611015-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 11/4/16	Analyst: IT
DRO (C10-C28)	120		5.6	mg/Kg-dry	1	11/5/2016 07:42 AM
Surr: 4-Terphenyl-d14	56.0		39-133	%REC	1	11/5/2016 07:42 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: IT
GRO (C6-C10)	ND		3.5	mg/Kg-dry	1	11/4/2016 05:45 PM
Surr: Toluene-d8	88.4		50-150	%REC	1	11/4/2016 05:45 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 11/4/16	Analyst: LSY
Benzene	ND		0.041	mg/Kg-dry	1	11/5/2016 12:13 PM
Ethylbenzene	ND		0.041	mg/Kg-dry	1	11/5/2016 12:13 PM
m,p-Xylene	ND		0.083	mg/Kg-dry	1	11/5/2016 12:13 PM
o-Xylene	ND		0.041	mg/Kg-dry	1	11/5/2016 12:13 PM
Toluene	ND		0.041	mg/Kg-dry	1	11/5/2016 12:13 PM
Xylenes, Total	ND		0.12	mg/Kg-dry	1	11/5/2016 12:13 PM
Surr: 1,2-Dichloroethane-d4	102		70-130	%REC	1	11/5/2016 12:13 PM
Surr: 4-Bromofluorobenzene	87.4		70-130	%REC	1	11/5/2016 12:13 PM
Surr: Dibromofluoromethane	92.7		70-130	%REC	1	11/5/2016 12:13 PM
Surr: Toluene-d8	97.2		70-130	%REC	1	11/5/2016 12:13 PM
ANIONS BY ION CHROMATOGRAPHY						
			SW9056A		Prep: EXTRACT / 11/3/16	Analyst: EE
Chloride	38,000		2,900	mg/Kg-dry	250	11/4/2016 09:35 PM
MOISTURE						
			SW3550C			Analyst: EDL
Moisture	16		0.050	% of sample	1	11/2/2016 07:03 PM

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

ALS Group, USA

Date: 08-Nov-16

Client: WPX Energy

Project: RDU 61

Sample ID: RDU 61 #2

Collection Date: 11/1/2016 11:40 AM

Work Order: 1611015

Lab ID: 1611015-02

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3546 / 11/4/16	Analyst: IT
DRO (C10-C28)	38		6.6	mg/Kg-dry	1	11/5/2016 08:12 AM
Surr: 4-Terphenyl-d14	52.5		39-133	%REC	1	11/5/2016 08:12 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: IT
GRO (C6-C10)	ND		3.6	mg/Kg-dry	1	11/4/2016 06:10 PM
Surr: Toluene-d8	99.3		50-150	%REC	1	11/4/2016 06:10 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 11/4/16	Analyst: LSY
Benzene	ND		0.043	mg/Kg-dry	1	11/5/2016 04:09 AM
Ethylbenzene	ND		0.043	mg/Kg-dry	1	11/5/2016 04:09 AM
m,p-Xylene	0.086		0.086	mg/Kg-dry	1	11/5/2016 04:09 AM
o-Xylene	ND		0.043	mg/Kg-dry	1	11/5/2016 04:09 AM
Toluene	0.063		0.043	mg/Kg-dry	1	11/5/2016 04:09 AM
Xylenes, Total	ND		0.13	mg/Kg-dry	1	11/5/2016 04:09 AM
Surr: 1,2-Dichloroethane-d4	101		70-130	%REC	1	11/5/2016 04:09 AM
Surr: 4-Bromofluorobenzene	89.4		70-130	%REC	1	11/5/2016 04:09 AM
Surr: Dibromofluoromethane	87.8		70-130	%REC	1	11/5/2016 04:09 AM
Surr: Toluene-d8	98.6		70-130	%REC	1	11/5/2016 04:09 AM
ANIONS BY ION CHROMATOGRAPHY						
			SW9056A		Prep: EXTRACT / 11/3/16	Analyst: EE
Chloride	1,300		120	mg/Kg-dry	10	11/4/2016 10:36 PM
MOISTURE						
			SW3550C			Analyst: EDL
Moisture	18		0.050	% of sample	1	11/2/2016 07:03 PM

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

Client: WPX Energy
Work Order: 1611015
Project: RDU 61

QC BATCH REPORT

Batch ID: **94043** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-94043-94043				Units: mg/Kg		Analysis Date: 11/5/2016 01:20 AM		
Client ID:		Run ID: GC8_161104A				SeqNo: 4137193		Prep Date: 11/4/2016		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	2.272	0	3.33	0	68.2	39-133		0		

LCS		Sample ID: DLCSS1-94043-94043				Units: mg/Kg		Analysis Date: 11/5/2016 01:50 AM		
Client ID:		Run ID: GC8_161104A				SeqNo: 4137194		Prep Date: 11/4/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	221.5	5.0	333	0	66.5	61-109		0		
Surr: 4-Terphenyl-d14	1.676	0	3.33	0	50.3	39-133		0		

MS		Sample ID: 1611017-02A MS				Units: mg/Kg		Analysis Date: 11/5/2016 02:19 AM		
Client ID:		Run ID: GC8_161104A				SeqNo: 4137195		Prep Date: 11/4/2016		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	4543	24	320.2	5638	-342	48-110		0		SO
Surr: 4-Terphenyl-d14	2.337	0	3.202	0	73	39-133		0		

MSD		Sample ID: 1611017-02A MSD				Units: mg/Kg		Analysis Date: 11/5/2016 02:48 AM		
Client ID:		Run ID: GC8_161104A				SeqNo: 4137196		Prep Date: 11/4/2016		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	2839	25	328.9	5638	-851	48-110	4543	46.2	30	SRO
Surr: 4-Terphenyl-d14	2.311	0	3.289	0	70.3	39-133	2.337	1.1	30	

The following samples were analyzed in this batch:

1611015-01A	1611015-02A
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Client: WPX Energy
 Work Order: 1611015
 Project: RDU 61

QC BATCH REPORT

Batch ID: **94050B** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-94050-94050B				Units: µg/Kg-dry		Analysis Date: 11/4/2016 01:12 PM		
Client ID:		Run ID: GC9_161105A				SeqNo: 4137245		Prep Date: 11/4/2016		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	4448	0	5000	0	89	50-150	0			

LCS		Sample ID: LCS-94050-94050B				Units: µg/Kg-dry		Analysis Date: 11/4/2016 12:47 PM		
Client ID:		Run ID: GC9_161105A				SeqNo: 4137244		Prep Date: 11/4/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	451300	2,500	500000	0	90.3	70-130	0			
Surr: Toluene-d8	5062	0	5000	0	101	50-150	0			

MS		Sample ID: 1611015-01A MS				Units: µg/Kg-dry		Analysis Date: 11/4/2016 09:04 PM		
Client ID: RDU 61 #1		Run ID: GC9_161105A				SeqNo: 4137254		Prep Date: 11/4/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	742100	3,500	690500	0	107	70-130	0			
Surr: Toluene-d8	8268	0	6905	0	120	50-150	0			

MSD		Sample ID: 1611015-01A MSD				Units: µg/Kg-dry		Analysis Date: 11/4/2016 09:29 PM		
Client ID: RDU 61 #1		Run ID: GC9_161105A				SeqNo: 4137255		Prep Date: 11/4/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	758200	3,500	690500	0	110	70-130	742100	2.16	30	
Surr: Toluene-d8	7140	0	6905	0	103	50-150	8268	14.7	30	

The following samples were analyzed in this batch:

1611015-01A	1611015-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy
 Work Order: 1611015
 Project: RDU 61

QC BATCH REPORT

Batch ID: 94064 Instrument ID VMS9 Method: SW8260B

MBLK Sample ID: MBLK-94064-94064				Units: µg/Kg-dry			Analysis Date: 11/4/2016 03:12 PM			
Client ID:		Run ID: VMS9_161104A		SeqNo: 4134672		Prep Date: 11/4/2016		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	961	0	1000	0	96.1	70-130	0			
Surr: 4-Bromofluorobenzene	938	0	1000	0	93.8	70-130	0			
Surr: Dibromofluoromethane	875	0	1000	0	87.5	70-130	0			
Surr: Toluene-d8	935	0	1000	0	93.5	70-130	0			

LCS Sample ID: LCS-94064-94064				Units: µg/Kg-dry			Analysis Date: 11/4/2016 01:59 PM			
Client ID:		Run ID: VMS9_161104A		SeqNo: 4134671		Prep Date: 11/4/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1024	30	1000	0	102	75-125	0			
Ethylbenzene	1091	30	1000	0	109	75-125	0			
m,p-Xylene	2264	60	2000	0	113	80-125	0			
o-Xylene	1102	30	1000	0	110	75-125	0			
Toluene	1049	30	1000	0	105	70-125	0			
Xylenes, Total	3366	90	3000	0	112	75-125	0			
Surr: 1,2-Dichloroethane-d4	993.5	0	1000	0	99.4	70-130	0			
Surr: 4-Bromofluorobenzene	999	0	1000	0	99.9	70-130	0			
Surr: Dibromofluoromethane	922.5	0	1000	0	92.2	70-130	0			
Surr: Toluene-d8	969	0	1000	0	96.9	70-130	0			

MS Sample ID: 1611015-01A MS				Units: µg/Kg-dry			Analysis Date: 11/5/2016 05:43 AM			
Client ID: RDU 61 #1		Run ID: VMS10_161104A		SeqNo: 4134361		Prep Date: 11/4/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1232	41	1381	0	89.2	75-125	0			
Ethylbenzene	1239	41	1381	0	89.7	75-125	0			
m,p-Xylene	2477	83	2762	0	89.7	80-125	0			
o-Xylene	1233	41	1381	0	89.3	75-125	0			
Toluene	1342	41	1381	0	97.2	70-125	0			
Xylenes, Total	3711	120	4143	0	89.6	75-125	0			
Surr: 1,2-Dichloroethane-d4	1226	0	1381	0	88.8	70-130	0			
Surr: 4-Bromofluorobenzene	1407	0	1381	0	102	70-130	0			
Surr: Dibromofluoromethane	1192	0	1381	0	86.3	70-130	0			
Surr: Toluene-d8	1418	0	1381	0	103	70-130	0			

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

Client: WPX Energy
 Work Order: 1611015
 Project: RDU 61

QC BATCH REPORT

Batch ID: 94064 Instrument ID VMS9 Method: SW8260B

MSD				Sample ID: 1611015-01A MSD			Units: µg/Kg-dry		Analysis Date: 11/5/2016 06:07 AM		
Client ID: RDU 61 #1			Run ID: VMS10_161104A			SeqNo: 4134362		Prep Date: 11/4/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1301	41	1381	0	94.2	75-125	1232	5.45	30		
Ethylbenzene	1301	41	1381	0	94.2	75-125	1239	4.89	30		
m,p-Xylene	2582	83	2762	0	93.5	80-125	2477	4.15	30		
o-Xylene	1264	41	1381	0	91.5	75-125	1233	2.43	30		
Toluene	1420	41	1381	0	103	70-125	1342	5.6	30		
Xylenes, Total	3846	120	4143	0	92.8	75-125	3711	3.58	30		
Surr: 1,2-Dichloroethane-d4	1254	0	1381	0	90.8	70-130	1226	2.28	30		
Surr: 4-Bromofluorobenzene	1423	0	1381	0	103	70-130	1407	1.12	30		
Surr: Dibromofluoromethane	1215	0	1381	0	88	70-130	1192	1.95	30		
Surr: Toluene-d8	1405	0	1381	0	102	70-130	1418	0.881	30		

The following samples were analyzed in this batch:

1611015-01A 1611015-02A

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

Client: WPX Energy
Work Order: 1611015
Project: RDU 61

QC BATCH REPORT

Batch ID: **94074** Instrument ID **IC4** Method: **SW9056A**

MBLK				Sample ID: MBLK-94074-94074				Units: mg/Kg			Analysis Date: 11/4/2016 06:33 PM			
Client ID:				Run ID: IC4_161104B				SeqNo: 4136453			Prep Date: 11/3/2016		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chloride		2.782	10								J			

LCS		Sample ID: LCS-94074-94074					Units: mg/Kg		Analysis Date: 11/4/2016 06:54 PM		
Client ID:			Run ID: IC4_161104B			SeqNo: 4136454		Prep Date: 11/3/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	102.5	10	100	0	102	80-120	0				

MS				Sample ID: 16101897-01A MS				Units: mg/Kg			Analysis Date: 11/4/2016 07:54 PM				
Client ID:				Run ID: IC4_161104B				SeqNo: 4136457			Prep Date: 11/3/2016			DF: 10	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Chloride		844	98	98.23	686.5	160	75-125	0			SO				

MSD		Sample ID: 16101897-01A MSD					Units: mg/Kg		Analysis Date: 11/4/2016 08:14 PM		
Client ID:		Run ID: IC4_161104B			SeqNo: 4136458		Prep Date: 11/3/2016		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	791.3	98	98.04	686.5	107	75-125	844	6.44	20	O	

The following samples were analyzed in this batch:

1611015-01A	1611015-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy
Work Order: 1611015
Project: RDU 61

QC BATCH REPORT

Batch ID: **R199765** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R199765					Units: % of sample		Analysis Date: 11/2/2016 07:03 PM		
Client ID:			Run ID: MOIST_161102F			SeqNo: 4130825		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-R199765				Units: % of sample		Analysis Date: 11/2/2016 07:03 PM		
Client ID:		Run ID: MOIST_161102F			SeqNo: 4130824		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: 1611142-01A DUP				Units: % of sample			Analysis Date: 11/2/2016 07:03 PM			
Client ID:				Run ID: MOIST_161102F				SeqNo: 4130820			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 11.76 0.050 0 0 0 11.26 4.34 20

DUP				Sample ID: 1611142-03A DUP				Units: % of sample			Analysis Date: 11/2/2016 07:03 PM			
Client ID:				Run ID: MOIST_161102F				SeqNo: 4130823			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.19 0.050 0 0 0 12 1.57 20

The following samples were analyzed in this batch:

1611015-01A 1611015-02A

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



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER #

1611015

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME RDU 61

SAMPLER

DATE

10/31/2018

PROJECT No.

EDD FORMAT

TURNAROUND

5 day

COMPANY NAME WPX Energy

PURCHASE ORDER

SEND REPORT TO Blaney

INVOICE ATTN TO Karolina Blaney

ADDRESS

ADDRESS 5315 Buena Vista Dr

CITY / STATE / ZIP

CITY / STATE / ZIP Carlsbad, NM 88220

PHONE

PHONE 970 589 0743

FAX

FAX

E-MAIL Karolina.blaney@wpxenergy.com;

E-MAIL Karolina.blaney@wpxenergy.com;
leo.braun@wpxenergy.com

TPH (DRO + GRO)

BTEX 8260

Chloride

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

1

RDU 61 #1

S

10/31/2016

11:30

1

8

x

x

x

x

2

RDU 61 #2

S

11/1/2016

11:40

1

8

x

x

x

x

*Time Zone (Circle): EST CST MST PST Matrix: O=oil S=sol NS=non-sol 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)

3.4%
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

Karolina Blaney

Karolina Blaney

10/31/2018

15:00

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Keith Wierenga

11/1/16

0930

Sample Receipt Checklist

Client Name: **WPX - NM**

Date/Time Received: **01-Nov-16 09:30**

Work Order: **1611015**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

01-Nov-16
Date

Reviewed by: Chad Whelton
eSignature

01-Nov-16
Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.4/3.4 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>11/1/2016 10:08:33 AM</u>		
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:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: