



Crystal Weaver  
Environmental Specialist  
NMOCD District II

October 23, 2017

Re: Sheep Draw 28-2 Closure summary – Case # 2RP-3845

Dear Ms. Weaver,

The purpose of this letter is to summarize remedial activities and sampling results that were completed in order close the incident that occurred on August 14, 2016 at the Sheep Draw 28-2 location.

Immediately after the incident, the affected area off location was fenced to keep the cattle out and the soil was mixed with a bioremediation product to address hydrocarbon impacts. The affected area on location was scraped off and disposed off at a permitted commercial facility.

On 9/20/16, two samples were collected from the surface of the impacted area and on 6/6/2017, additional samples were collected to delineate vertical impacts of chlorides. All sampling results are summarized in the table below. The raw analytical data is included as an attachment.

Location	Date	DRO (mg/kg)	GRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Chlorides (mg/kg)
Sheep Draw 28-2 1	9/20/16	860	41		ND	ND	ND	ND	6600
Sheep Draw 28-2 2	9/20/16	81	ND		ND	ND	ND	ND	170
Sheep Draw 28-2 3 0'	6/6/17	6.0	ND	8.2	ND	ND	ND	ND	970
Sheep Draw 28-2 3 2'	6/6/17								600
Sheep Draw 28-2 3 4'	6/6/17	ND	ND	7.9	ND	ND	ND	ND	350
Sheep Draw 28-2 3 6'	6/6/17								180
Sheep Draw 28-2 3 8'	6/6/17	9.1	ND	7.4	ND	ND	ND	ND	180

As the attached lab reports indicate, all organic compounds are in compliance with the cleanup requirements for this site. The chloride concentrations are delineated to 250 mg/kg which indicate that groundwater was not impacted by this spill. The well located at this site has been plugged and abandoned the site will be fully reclaimed upon this spill closure approval. 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](mailto:karolina.blaney@wpxenergy.com)

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	WPX Energy Inc/RKI	Contact	Karolina Blaney
Address	5315 Buena Vista Dr.	Telephone No.	970 589 0743
Facility Name:	Sheep Draw 28 Federal 2	Facility Type:	Well Pad
Surface Owner:	Private	Mineral Owner:	Federal
		API No.	30-015-27688

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	28	22S	26E	660	FSL	660	FEL	Eddy

Latitude: 32.030564 N Longitude: -103.8912511 W

### NATURE OF RELEASE

Type of Release:	produced water	Volume of Release:	10 Bbls	Volume Recovered:	5 Bbls
Source of Release	Wellhead	Date and Hour of Occurrence	8/14/2016	Date and Hour of Discovery	8/14/2016 – 9:30 hrs MT
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	NMOCD Heather Patterson and Michael Bratcher, and the land owner.		
By Whom?	Karolina Blaney	Date and Hour	8/15/16– 10:50 hrs MT; OCD via Email & Landowner by phone call		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.\* N/A


Describe Cause of Problem and Remedial Action Taken.\*

The cause of this spill is equipment failure. An nipple on the bleed valve corroded allowing produced water and small volume of oil to spill on location. A significant stormwater event, which occurred before the discovery of the spill, saturated the ground and mobilized some of the spilled water into the field located northeast of the pad. The impacted soil was mixed with a bioremediation product and the area was fenced to keep the cows out.

Describe Area Affected and Cleanup Action Taken.\*

On 9/20/16, two samples were collected from the surface of the impacted area and on 6/6/2017, additional samples were collected to delineate vertical impacts of chlorides. All sampling results are summarized in the attached table. The raw analytical data is included as an attachment. The well on this site has been plugged and abandoned and the pad underwent the final reclamation. The top 2' of the old reserve pit was removed and hauled off for disposal to further ensure that no residual spill impacts are left on site. The soil was replaced with native soil to ensure successful revegetation of the location.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Karolina Blaney	Approved by Environmental Specialist:		
Title: Environmental Specialist	Approval Date:	Expiration Date:	
E-mail Address: Karolina.blaney@wpenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 8/24/2016	Phone: 970-589-0743		

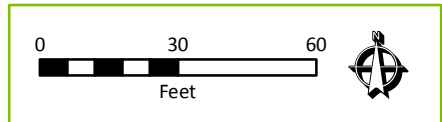
\* Attach Additional Sheets If Necessary



**Sheep Draw 28 Fed 2**  
Permian Basin

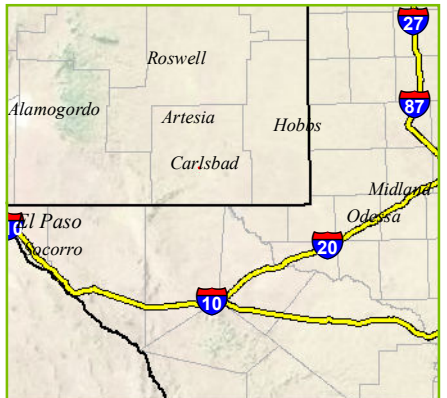
**WPXENERGY.**

Date: 7/3/2017  
Map Scale (at 8.5" x 11"): 1:500  
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







28-Sep-2016

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

Re: **Sheep Draw 28-2 spill**

Work Order: **16091217**

Dear Karolina,

ALS Environmental received 2 samples on 21-Sep-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 16.

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

**Client:** WPX Energy  
**Project:** Sheep Draw 28-2 spill  
**Work Order:** 16091217

## 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>
16091217-01	Sheep Draw 28-2 1	Soil		9/20/2016 07:10	9/21/2016 09:30	<input type="checkbox"/>
16091217-02	Sheep Draw 28-2 2	Soil		9/20/2016 07:20	9/21/2016 09:30	<input type="checkbox"/>

**Client:** WPX Energy  
**Project:** Sheep Draw 28-2 spill  
**Work Order:** 16091217

**Case Narrative**

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Batch 91941, Method DRO\_8015\_S, Sample 16091217-01A MS: The MS recovery was outside of the control limit for DRO. However, the MSD recovery and the RPD between the MS and MSD were in control. No qualification is required.

**Client:** WPX Energy  
**Project:** Sheep Draw 28-2 spill  
**WorkOrder:** 16091217

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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.

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

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

# ALS Group USA, Corp

Date: 28-Sep-16

**Client:** WPX Energy  
**Project:** Sheep Draw 28-2 spill  
**Sample ID:** Sheep Draw 28-2 1  
**Collection Date:** 9/20/2016 07:10 AM

**Work Order:** 16091217  
**Lab ID:** 16091217-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3550 / 9/26/16	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>860</b>		<b>7.1</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/27/2016 12:37 PM
Surr: 4-Terphenyl-d14	68.6		39-133	%REC	1	9/27/2016 12:37 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015D</b>		Prep: SW5035 / 9/23/16	Analyst: <b>IT</b>
<b>GRO (C6-C10)</b>	<b>41</b>		<b>3.8</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/23/2016 08:55 PM
Surr: Toluene-d8	101		50-150	%REC	1	9/23/2016 08:55 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 / 9/22/16	Analyst: <b>LSY</b>
Benzene	ND		0.046	mg/Kg-dry	1	9/25/2016 09:27 AM
Ethylbenzene	ND		0.046	mg/Kg-dry	1	9/25/2016 09:27 AM
m,p-Xylene	ND		0.092	mg/Kg-dry	1	9/25/2016 09:27 AM
o-Xylene	ND		0.046	mg/Kg-dry	1	9/25/2016 09:27 AM
Toluene	ND		0.046	mg/Kg-dry	1	9/25/2016 09:27 AM
Xylenes, Total	ND		0.14	mg/Kg-dry	1	9/25/2016 09:27 AM
Surr: 1,2-Dichloroethane-d4	98.0		70-130	%REC	1	9/25/2016 09:27 AM
Surr: 4-Bromofluorobenzene	96.2		70-130	%REC	1	9/25/2016 09:27 AM
Surr: Dibromofluoromethane	88.7		70-130	%REC	1	9/25/2016 09:27 AM
Surr: Toluene-d8	97.5		70-130	%REC	1	9/25/2016 09:27 AM
<b>ANIONS BY ION CHROMATOGRAPHY</b>						
			<b>SW9056A</b>		Prep: EXTRACT / 9/26/16	Analyst: <b>EE</b>
<b>Chloride</b>	<b>6,600</b>		<b>620</b>	<b>mg/Kg-dry</b>	<b>50</b>	9/27/2016 11:50 AM
<b>MOISTURE</b>						
			<b>SW3550C</b>			Analyst: <b>EDL</b>
<b>Moisture</b>	<b>21</b>		<b>0.050</b>	<b>% of sample</b>	<b>1</b>	9/24/2016 02:24 PM

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



# ALS Group USA, Corp

Date: 28-Sep-16

**Client:** WPX Energy  
**Project:** Sheep Draw 28-2 spill  
**Sample ID:** Sheep Draw 28-2 2  
**Collection Date:** 9/20/2016 07:20 AM

**Work Order:** 16091217  
**Lab ID:** 16091217-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>81</b>		<b>SW8015M</b>		Prep: SW3546 / 9/26/16	Analyst: <b>IT</b>
			<b>11</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/26/2016 08:35 PM
Surr: 4-Terphenyl-d14	75.7		39-133	%REC	1	9/26/2016 08:35 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015D</b>		Prep: SW5035 / 9/23/16	Analyst: <b>IT</b>
			<b>4.3</b>	<b>mg/Kg-dry</b>	<b>1</b>	9/23/2016 09:20 PM
Surr: Toluene-d8	102		50-150	%REC	1	9/23/2016 09:20 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
<b>SW8260B</b>					Prep: SW5035 / 9/22/16	Analyst: <b>LSY</b>
Benzene	ND		0.052	mg/Kg-dry	1	9/25/2016 09:51 AM
Ethylbenzene	ND		0.052	mg/Kg-dry	1	9/25/2016 09:51 AM
m,p-Xylene	ND		0.10	mg/Kg-dry	1	9/25/2016 09:51 AM
o-Xylene	ND		0.052	mg/Kg-dry	1	9/25/2016 09:51 AM
Toluene	ND		0.052	mg/Kg-dry	1	9/25/2016 09:51 AM
Xylenes, Total	ND		0.16	mg/Kg-dry	1	9/25/2016 09:51 AM
Surr: 1,2-Dichloroethane-d4	94.2		70-130	%REC	1	9/25/2016 09:51 AM
Surr: 4-Bromofluorobenzene	96.0		70-130	%REC	1	9/25/2016 09:51 AM
Surr: Dibromofluoromethane	91.1		70-130	%REC	1	9/25/2016 09:51 AM
Surr: Toluene-d8	97.0		70-130	%REC	1	9/25/2016 09:51 AM
<b>ANIONS BY ION CHROMATOGRAPHY</b>						
<b>SW9056A</b>					Prep: EXTRACT / 9/26/16	Analyst: <b>EE</b>
Chloride	170		66	mg/Kg-dry	5	9/27/2016 12:10 PM
<b>MOISTURE</b>						
<b>SW3550C</b>						Analyst: <b>EDL</b>
Moisture	27		0.050	% of sample	1	9/24/2016 02:24 PM

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

**Client:** WPX Energy  
**Work Order:** 16091217  
**Project:** Sheep Draw 28-2 spill

# QC BATCH REPORT

Batch ID: **91921** Instrument ID **GC8** Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>DBLKS1-91921-91921</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 05:04 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050025</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	8.3								
Surr: 4-Terphenyl-d14	2.641	0	3.333	0	79.2	39-133		0		

<b>LCS</b>		Sample ID: <b>DLCSS1-91921-91921</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 05:34 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050026</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	301.2	8.3	333.3	0	90.4	61-109		0		
Surr: 4-Terphenyl-d14	2.631	0	3.333	0	78.9	39-133		0		

<b>MS</b>		Sample ID: <b>16091439-02A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 06:04 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050027</b>		Prep Date: <b>9/26/2016</b>		DF: <b>50</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	63830	4,000	321.5	84730	-6500	48-110		0		SO
Surr: 4-Terphenyl-d14	74.26	0	3.215	0	2310	39-133		0		S

<b>MSD</b>		Sample ID: <b>16091439-02A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 06:35 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050029</b>		Prep Date: <b>9/26/2016</b>		DF: <b>50</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	59910	4,100	331.7	84730	-7480	48-110	63830	6.33	30	SO
Surr: 4-Terphenyl-d14	71.97	0	3.317	0	2170	39-133	74.26	3.13	30	S

The following samples were analyzed in this batch:

16091217-02A
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Client: WPX Energy  
 Work Order: 16091217  
 Project: Sheep Draw 28-2 spill

## QC BATCH REPORT

Batch ID: 91941 Instrument ID GC8 Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-91941-91941</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 10:36 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050037</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
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	1.7	0	2	0	85	39-133	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-91941-91941</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 11:06 PM</b>		
Client ID:		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050038</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	165.7	5.0	200	0	82.8	61-109	0			
Surr: 4-Terphenyl-d14	1.455	0	2	0	72.7	39-133	0			

<b>MS</b>		Sample ID: <b>16091217-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/26/2016 11:37 PM</b>		
Client ID: <b>Sheep Draw 28-2 1</b>		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050039</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	753.4	5.6	223.1	682.9	31.6	48-110	0			S
Surr: 4-Terphenyl-d14	1.559	0	2.231	0	69.9	39-133	0			

<b>MSD</b>		Sample ID: <b>16091217-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>9/27/2016 12:07 PM</b>		
Client ID: <b>Sheep Draw 28-2 1</b>		Run ID: <b>GC8_160926A</b>				SeqNo: <b>4050042</b>		Prep Date: <b>9/26/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	796.4	5.6	223.1	682.9	50.9	48-110	753.4	5.55	30	
Surr: 4-Terphenyl-d14	1.45	0	2.231	0	65	39-133	1.559	7.24	30	

The following samples were analyzed in this batch:

16091217-01A

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

Client: WPX Energy  
 Work Order: 16091217  
 Project: Sheep Draw 28-2 spill

# QC BATCH REPORT

Batch ID: **91834** Instrument ID **GC9** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-91834-91834</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>9/23/2016 03:31 PM</b>		
Client ID:		Run ID: <b>GC9_160923A</b>				SeqNo: <b>4047393</b>		Prep Date: <b>9/23/2016</b>		DF: <b>1</b>
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	4140	0	5000	0	82.8	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-91834-91834</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>9/23/2016 03:06 PM</b>		
Client ID:		Run ID: <b>GC9_160923A</b>				SeqNo: <b>4047392</b>		Prep Date: <b>9/23/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	525200	2,500	500000	0	105	70-130	0			
Surr: Toluene-d8	5466	0	5000	0	109	50-150	0			

<b>MS</b>		Sample ID: <b>16091139-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>9/23/2016 06:25 PM</b>		
Client ID:		Run ID: <b>GC9_160923A</b>				SeqNo: <b>4047400</b>		Prep Date: <b>9/23/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	736100	3,500	690500	62620	97.5	70-130	0			
Surr: Toluene-d8	7685	0	6905	0	111	50-150	0			

<b>MSD</b>		Sample ID: <b>16091139-01A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>9/23/2016 06:50 PM</b>		
Client ID:		Run ID: <b>GC9_160923A</b>				SeqNo: <b>4047401</b>		Prep Date: <b>9/23/2016</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	773600	3,500	690500	62620	103	70-130	736100	4.98	30	
Surr: Toluene-d8	7328	0	6905	0	106	50-150	7685	4.76	30	

The following samples were analyzed in this batch:

16091217-01A	16091217-02A
--------------	--------------

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

**Client:** WPX Energy  
**Work Order:** 16091217  
**Project:** Sheep Draw 28-2 spill

## QC BATCH REPORT

Batch ID: **91795**      Instrument ID **VMS7**      Method: **SW8260B**

MBLK				Sample ID: MBLK-91795-91795				Units: µg/Kg-dry			Analysis Date: 9/22/2016 11:49 AM		
Client ID:			Run ID: VMS7_160922A				SeqNo: 4042590		Prep Date: 9/22/2016		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	1042	0	1000	0	104	70-130		0					
Surr: 4-Bromofluorobenzene	976	0	1000	0	97.6	70-130		0					
Surr: Dibromofluoromethane	897.5	0	1000	0	89.8	70-130		0					
Surr: Toluene-d8	1012	0	1000	0	101	70-130		0					

LCS				Sample ID: LCS-91795-91795		Units: µg/Kg-dry		Analysis Date: 9/22/2016 10:40 AM		
Client ID:			Run ID: VMS7_160922A		SeqNo: 4042589		Prep Date: 9/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1018	30	1000	0	102	75-125	0			
Ethylbenzene	1030	30	1000	0	103	75-125	0			
m,p-Xylene	2057	60	2000	0	103	80-125	0			
o-Xylene	1033	30	1000	0	103	75-125	0			
Toluene	1036	30	1000	0	104	70-125	0			
Xylenes, Total	3090	90	3000	0	103	75-125	0			
Surr: 1,2-Dichloroethane-d4	1013	0	1000	0	101	70-130	0			
Surr: 4-Bromofluorobenzene	989	0	1000	0	98.9	70-130	0			
Surr: Dibromofluoromethane	1002	0	1000	0	100	70-130	0			
Surr: Toluene-d8	1003	0	1000	0	100	70-130	0			

MS				Sample ID: 16091139-01A MS		Units: µg/Kg-dry		Analysis Date: 9/25/2016 06:34 AM		
Client ID:			Run ID: VMS8_160924A		SeqNo: 4046854		Prep Date: 9/22/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2187	41	1381	753.3	104	75-125		0		
Ethylbenzene	1688	41	1381	184.4	109	75-125		0		
m,p-Xylene	4179	83	2762	1313	104	80-125		0		
o-Xylene	1763	41	1381	285.9	107	75-125		0		
Toluene	3209	41	1381	1746	106	70-125		0		
Xylenes, Total	5942	120	4143	1598	105	75-125		0		
Surr: 1,2-Dichloroethane-d4	1257	0	1381	0	91	70-130		0		
Surr: 4-Bromofluorobenzene	1369	0	1381	0	99.1	70-130		0		
Surr: Dibromofluoromethane	1304	0	1381	0	94.4	70-130		0		
Surr: Toluene-d8	1351	0	1381	0	97.8	70-130		0		

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

**Client:** WPX Energy  
**Work Order:** 16091217  
**Project:** Sheep Draw 28-2 spill

## QC BATCH REPORT

Batch ID: **91795**      Instrument ID **VMS7**      Method: **SW8260B**

MSD				Sample ID: 16091139-01A MSD			Units: µg/Kg-dry		Analysis Date: 9/25/2016 06:58 AM	
Client ID:				Run ID: VMS8_160924A			SeqNo: 4046855		Prep Date: 9/22/2016	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2165	41	1381	753.3	102	75-125	2187	1.02	30	
Ethylbenzene	1625	41	1381	184.4	104	75-125	1688	3.83	30	
m,p-Xylene	4018	83	2762	1313	98	80-125	4179	3.93	30	
o-Xylene	1687	41	1381	285.9	101	75-125	1763	4.4	30	
Toluene	3101	41	1381	1746	98.1	70-125	3209	3.41	30	
Xylenes, Total	5705	120	4143	1598	99.1	75-125	5942	4.07	30	
Surr: 1,2-Dichloroethane-d4	1295	0	1381	0	93.8	70-130	1257	2.98	30	
Surr: 4-Bromofluorobenzene	1351	0	1381	0	97.8	70-130	1369	1.32	30	
Surr: Dibromofluoromethane	1305	0	1381	0	94.5	70-130	1304	0.0529	30	
Surr: Toluene-d8	1324	0	1381	0	95.8	70-130	1351	2.01	30	

The following samples were analyzed in this batch:

16091217-01A	16091217-02A
--------------	--------------

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



**Client:** WPX Energy  
**Work Order:** 16091217  
**Project:** Sheep Draw 28-2 spill

## QC BATCH REPORT

Batch ID: **92059** Instrument ID **IC3** Method: **SW9056A**

MBLK				Sample ID: MBLK-92059-92059				Units: mg/Kg			Analysis Date: 9/27/2016 10:29 AM			
Client ID:				Run ID: IC3_160927A				SeqNo: 4052283			Prep Date: 9/26/2016		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chloride		2.968	10								J			

LCS		Sample ID: LCS-92059-92059					Units: mg/Kg		Analysis Date: 9/27/2016 10:49 AM		
Client ID:		Run ID: IC3_160927A			SeqNo: 4052286		Prep Date: 9/26/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	105.2	10	100	0	105	80-120	0				

MS		Sample ID: 16091454-04A MS				Units: mg/Kg		Analysis Date: 9/27/2016 01:11 PM		
Client ID:		Run ID: IC3_160927A				SeqNo: 4052300		Prep Date: 9/26/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	109	9.8	98.23	6.709	104	75-125	0			

MSD		Sample ID: 16091454-04A MSD					Units: mg/Kg		Analysis Date: 9/27/2016 01:31 PM		
Client ID:		Run ID: IC3_160927A			SeqNo: 4052302		Prep Date: 9/26/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	109.5	9.8	98.43	6.709	104	75-125	109	0.45	20		

The following samples were analyzed in this batch:

16091217-01A	16091217-02A
--------------	--------------

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

**Client:** WPX Energy  
**Work Order:** 16091217  
**Project:** Sheep Draw 28-2 spill

## QC BATCH REPORT

Batch ID: **R196505** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R196505</b>				Units: % of sample		Analysis Date: <b>9/24/2016 02:24 PM</b>		
Client ID:		Run ID: <b>MOIST_160924B</b>				SeqNo: <b>4045914</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

<b>LCS</b>		Sample ID: <b>LCS-R196505</b>				Units: % of sample		Analysis Date: <b>9/24/2016 02:24 PM</b>		
Client ID:		Run ID: <b>MOIST_160924B</b>				SeqNo: <b>4045913</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>16091271-01A DUP</b>				Units: % of sample		Analysis Date: <b>9/24/2016 02:24 PM</b>		
Client ID:		Run ID: <b>MOIST_160924B</b>				SeqNo: <b>4045897</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.5 0.050 0 0 0 20.52 0.0975 20

<b>DUP</b>		Sample ID: <b>16091304-08A DUP</b>				Units: % of sample		Analysis Date: <b>9/24/2016 02:24 PM</b>		
Client ID:		Run ID: <b>MOIST_160924B</b>				SeqNo: <b>4045907</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 81.59 0.050 0 0 0 81.91 0.391 20

The following samples were analyzed in this batch:

16091217-01A	16091217-02A
--------------	--------------

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



# ALS Laboratory Group

HOLLAND, Michigan 49424

## Chain-of-Custody

Form 202r8

WORKORDER #

100591217

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME Sheep Draw 28-2 spill

SAMPLER

DATE

9/20/2016

SITE ID

Sheep Draw 28-2 spill

TURNAROUND

5 day

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

WPX Energy

BILL TO COMPANY

WPX Energy

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 8015

BTEX 8280

Chloride

Lab ID

Field ID

Matrix

Sample Date

Sample Time

# Bottles

Pres.

QC

Sheep Draw 28-2 1

S

9/20/2016

7:10

1

8

x

x

x

Sheep Draw 28-2 2

S

9/20/2016

7:20

1

8

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-NaHCO4 7-Other 8-4 degrees C 9-5035

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

Karolina Blaney

Karolina Blaney

9/20/2016

15:00

RECEIVED BY

[Signature]

[Signature]

9/21/16

9:30

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

252

**FedEx** Package  
Express US Airbill
FedEx  
Tracking  
Number

8108 0927 4190

Form  
ID No. 0215

Recipient's Copy

1 From **[REDACTED]**  
Date **9/20/16**  
Sender's Name **KAROLINA BLANE 1** Phone **970 589073**  
Company **LIX ENERGY**  
Address **5315 BUENA VISTA DR**  
City **CARLSBAD NM** State **NM** ZIP **88220**

2. Your Internal Billing Reference

3 To  
Recipient's Name **SAMPLE RECEIVING** Phone **616 399-6070**  
Company **ALS ENVIRONMENTAL HOLLAND LAB**  
Address **3352 128TH AVE**  
We cannot deliver to P.O. boxes or P.O. ZIP codes.  
Dept./Floor/Suite/Room  
Address  
Use this line for the HOLD location address or for continuation of your shipping address.  
City **HOLLAND** State **MI** ZIP **49424-9263**

Hold Weekday  
FedEx location address  
REQUIRED. NOT available for  
FedEx First Overnight.

Hold Saturday  
FedEx location address  
REQUIRED. Available ONLY for  
FedEx Priority Overnight and  
FedEx 2Day to select locations.

## 4 Express Package Service

\* To most locations.

Packages up to 150 lbs.  
For packages over 150 lbs., use the  
FedEx Express Freight CR Airbill.

## Next Business Day

☐ FedEx First Overnight  
Earliest next business day delivery to select  
locations. Friday shipments will be delivered on  
Monday unless Saturday Delivery is selected.

☐ FedEx Priority Overnight  
Next business day delivery to select  
locations. Friday shipments will be  
delivered on Monday unless Saturday Delivery  
is selected.

☐ FedEx Standard Overnight  
Next business day delivery.  
Saturday Delivery NOT available.

## 2 or 3 Business Days

☐ FedEx 2Day A.M.  
Second business morning.  
Saturday Delivery NOT available.

☐ FedEx 2Day  
Second business afternoon. \* Thursday shipments  
will be delivered on Monday unless Saturday  
Delivery is selected.

☐ FedEx Express Saver  
Third business day.  
Saturday Delivery NOT available.

## 5 Packaging \* Required unless FedEx

☐ FedEx Envelope\*☐ FedEx Pak\*☐ FedEx Box☒ FedEx Tube☐ Other

## 6 Special Handling and Delivery Signature Options Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required  
Package may be left without  
obtaining a signature for delivery.

☐ Direct Signature  
Someone at recipient's address  
must sign for delivery.

☐ Indirect Signature  
If no one is available at recipient's  
address, someone at a neighboring  
address may sign for delivery. For  
residential deliveries only.

## Does this shipment contain dangerous goods?

☒ No ☐ Yes  
See box must be checked.  
As per attached  
Shipper's Declaration.

☐ Yes  
Shipper's Declaration  
not required.

☐ Dry Ice  
Dry Ice, 6 Lb. UN 1845 \_\_\_\_\_ kg

Non-hazardous apply for dangerous goods — see the current FedEx Service Guide.

☐ Cargo Aircraft Only7 Payment **bill to**

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip.  
Acct. No. ☐

☐ Sender  
Pay this bill to  
FedEx by check.

☒ Recipient☐ Third Party☐ Credit Card☐ Cash/CheckTotal Packages **1**Total Weight **6.4**

Credit Card Auth.

Your liability is limited to \$100 per package unless you declare a higher value. See the current FedEx Service Guide for details.

611

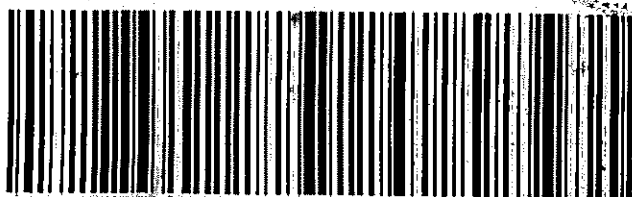
Rev. Date 5/15 • Part 1103124 • ©1984-2015 FedEx • PRINTED IN U.S.A. 6594

**FedEx**  
TRK#  
0215 8108 0927 4190

WED - 21 SEP 10:30A  
PRIORITY OVERNIGHT

49424  
MI-US  
GRR

XX HLMA



FID 5037326 20SEP16 ROMA 539C1/A953/37E4

Sample Receipt Checklist

Client Name: **WPX - NM**

Date/Time Received: **21-Sep-16 09:30**

Work Order: **16091217**

Received by: **MBB**

Checklist completed by Meghan Broadbent  
eSignature

21-Sep-16  
Date

Reviewed by: Chad Whelton  
eSignature

22-Sep-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): 4.2/4.2 SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 9/21/2016 3:19:10 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:



16-Jun-2017

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

Re: **Sheep Draw 28-Fed 2**

Work Order: **1706556**

Dear Karolina,

ALS Environmental received 5 samples on 09-Jun-2017 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 industry accepted practices and Quality Control 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,

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, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER



---

**Client:** WPX Energy  
**Project:** Sheep Draw 28-Fed 2  
**Work Order:** 1706556

**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>
1706556-01	Sheep Draw 28-Fed 2 S3 Surface	Soil		6/6/2017 14:00	6/9/2017 09:30	<input type="checkbox"/>
1706556-02	Sheep Draw 28-Fed 2 S3 2'	Soil		6/6/2017 14:05	6/9/2017 09:30	<input type="checkbox"/>
1706556-03	Sheep Draw 28-Fed 2 S3 4'	Soil		6/6/2017 14:10	6/9/2017 09:30	<input type="checkbox"/>
1706556-04	Sheep Draw 28-Fed 2 S3 6'	Soil		6/6/2017 14:15	6/9/2017 09:30	<input type="checkbox"/>
1706556-05	Sheep Draw 28-Fed 2 S3 8'	Soil		6/6/2017 14:20	6/9/2017 09:30	<input type="checkbox"/>

**Client:** WPX Energy  
**Project:** Sheep Draw 28-Fed 2  
**WorkOrder:** 1706556

## QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-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
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: 16-Jun-17

**Client:** WPX Energy  
**Project:** Sheep Draw 28-Fed 2  
**Sample ID:** Sheep Draw 28-Fed 2 S3 Surface  
**Collection Date:** 6/6/2017 02:00 PM

**Work Order:** 1706556  
**Lab ID:** 1706556-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015C</b>		Prep: SW3546 6/12/17 14:34	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>6.0</b>		<b>5.7</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/12/2017 05:24 PM
<b>ORO (C28-C40)</b>	<b>8.2</b>		<b>5.7</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/12/2017 05:24 PM
Surr: 4-Terphenyl-d14	70.6		47-137	%REC	1	6/12/2017 05:24 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015D</b>		Prep: SW5035 6/12/17 14:32	Analyst: <b>IT</b>
GRO (C6-C10)	ND		3.3	mg/Kg-dry	1	6/14/2017 08:35 AM
Surr: Toluene-d8	98.6		50-150	%REC	1	6/14/2017 08:35 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 6/12/17 14:29	Analyst: <b>WH</b>
Benzene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:19 AM
Ethylbenzene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:19 AM
m,p-Xylene	ND		0.060	mg/Kg-dry	1	6/13/2017 02:19 AM
o-Xylene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:19 AM
Toluene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:19 AM
Xylenes, Total	ND		0.090	mg/Kg-dry	1	6/13/2017 02:19 AM
Surr: 1,2-Dichloroethane-d4	99.4		70-130	%REC	1	6/13/2017 02:19 AM
Surr: 4-Bromofluorobenzene	103		70-130	%REC	1	6/13/2017 02:19 AM
Surr: Dibromofluoromethane	84.0		70-130	%REC	1	6/13/2017 02:19 AM
Surr: Toluene-d8	94.2		70-130	%REC	1	6/13/2017 02:19 AM
<b>CHLORIDE</b>						
			<b>A4500-CL E-97</b>		Prep: EXTRACT 6/13/17 12:20	Analyst: <b>LW</b>
Chloride	<b>970</b>		<b>47</b>	<b>mg/Kg-dry</b>	<b>4</b>	6/13/2017 01:06 PM
<b>MOISTURE</b>						
			<b>SW3550C</b>			Analyst: <b>SBR</b>
Moisture	<b>14</b>		<b>0.050</b>	<b>% of sample</b>	<b>1</b>	6/13/2017 04:14 PM

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

**ALS Group, USA****Date:** 16-Jun-17**Client:** WPX Energy**Project:** Sheep Draw 28-Fed 2**Work Order:** 1706556**Sample ID:** Sheep Draw 28-Fed 2 S3 2'**Lab ID:** 1706556-02**Collection Date:** 6/6/2017 02:05 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CHLORIDE</b>			<b>A4500-CL E-97</b>	Prep: EXTRACT	6/13/17 12:20	Analyst: <b>LW</b>
Chloride	600		12	mg/Kg-dry	1	6/13/2017 01:06 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>SBR</b>
Moisture	18		0.050	% of sample	1	6/13/2017 04:14 PM

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

# ALS Group, USA

Date: 16-Jun-17

Client: WPX Energy

Project: Sheep Draw 28-Fed 2

Sample ID: Sheep Draw 28-Fed 2 S3 4'

Collection Date: 6/6/2017 02:10 PM

Work Order: 1706556

Lab ID: 1706556-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015C</b>		Prep: SW3546 6/12/17 14:34	Analyst: <b>IT</b>
DRO (C10-C28)	ND		6.6	mg/Kg-dry	1	6/12/2017 04:55 PM
<b>ORO (C28-C40)</b>	<b>7.9</b>		<b>6.6</b>	<b>mg/Kg-dry</b>	1	6/12/2017 04:55 PM
Surr: 4-Terphenyl-d14	92.1		47-137	%REC	1	6/12/2017 04:55 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015D</b>		Prep: SW5035 6/12/17 14:32	Analyst: <b>IT</b>
GRO (C6-C10)	ND		4.2	mg/Kg-dry	1	6/14/2017 10:44 AM
Surr: Toluene-d8	97.2		50-150	%REC	1	6/14/2017 10:44 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 6/12/17 14:29	Analyst: <b>WH</b>
Benzene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:42 AM
Ethylbenzene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:42 AM
m,p-Xylene	ND		0.060	mg/Kg-dry	1	6/13/2017 02:42 AM
o-Xylene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:42 AM
Toluene	ND		0.030	mg/Kg-dry	1	6/13/2017 02:42 AM
Xylenes, Total	ND		0.090	mg/Kg-dry	1	6/13/2017 02:42 AM
Surr: 1,2-Dichloroethane-d4	97.4		70-130	%REC	1	6/13/2017 02:42 AM
Surr: 4-Bromofluorobenzene	101		70-130	%REC	1	6/13/2017 02:42 AM
Surr: Dibromofluoromethane	83.5		70-130	%REC	1	6/13/2017 02:42 AM
Surr: Toluene-d8	95.7		70-130	%REC	1	6/13/2017 02:42 AM
<b>CHLORIDE</b>						
			<b>A4500-CL E-97</b>		Prep: EXTRACT 6/13/17 12:20	Analyst: <b>LW</b>
Chloride	350		13	mg/Kg-dry	1	6/13/2017 01:06 PM
<b>MOISTURE</b>						
			<b>SW3550C</b>			Analyst: <b>SBR</b>
Moisture	25		0.050	% of sample	1	6/13/2017 04:14 PM

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

**ALS Group, USA****Date:** 16-Jun-17**Client:** WPX Energy**Project:** Sheep Draw 28-Fed 2**Work Order:** 1706556**Sample ID:** Sheep Draw 28-Fed 2 S3 6'**Lab ID:** 1706556-04**Collection Date:** 6/6/2017 02:15 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CHLORIDE</b>			<b>A4500-CL E-97</b>	Prep: EXTRACT 6/13/17 12:20		Analyst: <b>LW</b>
Chloride	180		13	mg/Kg-dry	1	6/13/2017 01:06 PM
<b>MOISTURE</b>			<b>SW3550C</b>			Analyst: <b>SBR</b>
Moisture	22		0.050	% of sample	1	6/13/2017 04:14 PM

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



# ALS Group, USA

Date: 16-Jun-17

Client: WPX Energy

Project: Sheep Draw 28-Fed 2

Sample ID: Sheep Draw 28-Fed 2 S3 8'

Collection Date: 6/6/2017 02:20 PM

Work Order: 1706556

Lab ID: 1706556-05

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015C</b>		Prep: SW3546 6/12/17 14:34	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>9.1</b>		<b>6.6</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/12/2017 05:54 PM
<b>ORO (C28-C40)</b>	<b>7.4</b>		<b>6.6</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/12/2017 05:54 PM
Surr: 4-Terphenyl-d14	93.6		47-137	%REC	1	6/12/2017 05:54 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015D</b>		Prep: SW5035 6/12/17 14:32	Analyst: <b>IT</b>
GRO (C6-C10)	ND		4.2	mg/Kg-dry	1	6/14/2017 11:09 AM
Surr: Toluene-d8	99.0		50-150	%REC	1	6/14/2017 11:09 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 6/12/17 14:29	Analyst: <b>WH</b>
Benzene	ND		0.030	mg/Kg-dry	1	6/13/2017 03:05 AM
Ethylbenzene	ND		0.030	mg/Kg-dry	1	6/13/2017 03:05 AM
m,p-Xylene	ND		0.060	mg/Kg-dry	1	6/13/2017 03:05 AM
o-Xylene	ND		0.030	mg/Kg-dry	1	6/13/2017 03:05 AM
Toluene	ND		0.030	mg/Kg-dry	1	6/13/2017 03:05 AM
Xylenes, Total	ND		0.090	mg/Kg-dry	1	6/13/2017 03:05 AM
Surr: 1,2-Dichloroethane-d4	99.2		70-130	%REC	1	6/13/2017 03:05 AM
Surr: 4-Bromofluorobenzene	102		70-130	%REC	1	6/13/2017 03:05 AM
Surr: Dibromofluoromethane	85.9		70-130	%REC	1	6/13/2017 03:05 AM
Surr: Toluene-d8	98.1		70-130	%REC	1	6/13/2017 03:05 AM
<b>CHLORIDE</b>						
			<b>A4500-CL E-97</b>		Prep: EXTRACT 6/13/17 12:20	Analyst: <b>LW</b>
Chloride	<b>180</b>		<b>13</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/13/2017 01:06 PM
<b>MOISTURE</b>						
			<b>SW3550C</b>			Analyst: <b>SBR</b>
Moisture	<b>25</b>		<b>0.050</b>	<b>% of sample</b>	<b>1</b>	6/13/2017 04:14 PM

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

**Client:** WPX Energy  
**Work Order:** 1706556  
**Project:** Sheep Draw 28-Fed 2

**QC BATCH REPORT**

Batch ID: **103055** Instrument ID **GC8** Method: **SW8015C**

<b>MBLK</b>		Sample ID: <b>DBLKS1-103055-103055</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/12/2017 02:56 PM</b>		
Client ID:		Run ID: <b>GC8_170612A</b>				SeqNo: <b>4476733</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	4.2	5.0								J
ORO (C28-C40)	2.882	5.0								J
Surr: 4-Terphenyl-d14	2.933	0	3.33	0	88.1	47-137	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-103055-103055</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/12/2017 03:26 PM</b>		
Client ID:		Run ID: <b>GC8_170612A</b>				SeqNo: <b>4476734</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	296.4	5.0	333	0	89	65-122	0			
ORO (C28-C40)	332.1	5.0	333	0	99.7	81-116	0			
Surr: 4-Terphenyl-d14	3.25	0	3.33	0	97.6	47-137	0			

<b>MS</b>		Sample ID: <b>1706556-03A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/12/2017 03:55 PM</b>		
Client ID: <b>Sheep Draw 28-Fed 2 S3 4'</b>		Run ID: <b>GC8_170612A</b>				SeqNo: <b>4476735</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	287.9	4.9	327.3	3.804	86.8	65-122	0			
ORO (C28-C40)	334.3	4.9	327.3	5.963	100	81-116	0			
Surr: 4-Terphenyl-d14	3.26	0	3.273	0	99.6	47-137	0			

<b>MSD</b>		Sample ID: <b>1706556-03A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/12/2017 04:25 PM</b>		
Client ID: <b>Sheep Draw 28-Fed 2 S3 4'</b>		Run ID: <b>GC8_170612A</b>				SeqNo: <b>4476736</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	279.1	4.9	324	3.804	85	65-122	287.9	3.08	30	
ORO (C28-C40)	347.2	4.9	324	5.963	105	81-116	334.3	3.79	30	
Surr: 4-Terphenyl-d14	3.178	0	3.24	0	98.1	47-137	3.26	2.54	30	

The following samples were analyzed in this batch: 1706556-01A 1706556-03A 1706556-05A

Client: WPX Energy  
 Work Order: 1706556  
 Project: Sheep Draw 28-Fed 2

## QC BATCH REPORT

Batch ID: **103103** Instrument ID **GC9** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-103103-103103</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/14/2017 06:01 AM</b>		
Client ID:		Run ID: <b>GC9_170613A</b>				SeqNo: <b>4479543</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
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	4550	0	5000	0	91	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-103103-103103</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/14/2017 05:10 AM</b>		
Client ID:		Run ID: <b>GC9_170613A</b>				SeqNo: <b>4479542</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	518000	2,500	500000	0	104	70-130	0			
Surr: Toluene-d8	5589	0	5000	0	112	50-150	0			

<b>MS</b>		Sample ID: <b>1706556-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/14/2017 09:00 AM</b>		
Client ID: <b>Sheep Draw 28-Fed 2 S3 Surface</b>		Run ID: <b>GC9_170613A</b>				SeqNo: <b>4479550</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	621700	3,300	662800	0	93.8	70-130	0			
Surr: Toluene-d8	6962	0	6628	0	105	50-150	0			

<b>MSD</b>		Sample ID: <b>1706556-01A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/14/2017 09:26 AM</b>		
Client ID: <b>Sheep Draw 28-Fed 2 S3 Surface</b>		Run ID: <b>GC9_170613A</b>				SeqNo: <b>4479551</b>		Prep Date: <b>6/12/2017</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	689000	3,300	662800	0	104	70-130	621700	10.3	30	
Surr: Toluene-d8	7580	0	6628	0	114	50-150	6962	8.5	30	

The following samples were analyzed in this batch:

1706556-01A	1706556-03A	1706556-05A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy  
 Work Order: 1706556  
 Project: Sheep Draw 28-Fed 2

# QC BATCH REPORT

Batch ID: 103102 Instrument ID VMS9 Method: SW8260B

MBLK Sample ID: MBLK-103102-103102				Units: µg/Kg-dry			Analysis Date: 6/12/2017 01:06 PM			
Client ID:		Run ID: VMS9_170612A		SeqNo: 4476403		Prep Date: 6/12/2017		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	988.5	0	1000	0	98.8	70-130	0			
Surr: 4-Bromofluorobenzene	1060	0	1000	0	106	70-130	0			
Surr: Dibromofluoromethane	963.5	0	1000	0	96.4	70-130	0			
Surr: Toluene-d8	938.5	0	1000	0	93.8	70-130	0			

LCS Sample ID: LCS-103102-103102				Units: µg/Kg-dry			Analysis Date: 6/12/2017 11:57 AM			
Client ID:		Run ID: VMS9_170612A		SeqNo: 4476402		Prep Date: 6/12/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	959	30	1000	0	95.9	75-125	0			
Ethylbenzene	973	30	1000	0	97.3	75-125	0			
m,p-Xylene	1966	60	2000	0	98.3	80-125	0			
o-Xylene	982.5	30	1000	0	98.2	75-125	0			
Toluene	954.5	30	1000	0	95.4	70-125	0			
Xylenes, Total	2949	90	3000	0	98.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	993.5	0	1000	0	99.4	70-130	0			
Surr: 4-Bromofluorobenzene	1004	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	1060	0	1000	0	106	70-130	0			
Surr: Toluene-d8	991	0	1000	0	99.1	70-130	0			

MS Sample ID: 1706556-01A MS				Units: µg/Kg-dry			Analysis Date: 6/13/2017 08:07 AM			
Client ID: Sheep Draw 28-Fed 2 S3 Surface		Run ID: VMS9_170612B		SeqNo: 4476501		Prep Date: 6/12/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	784	30	1000	0	78.4	75-125	0			
Ethylbenzene	791.5	30	1000	0	79.2	75-125	0			
m,p-Xylene	1607	60	2000	0	80.4	80-125	0			
o-Xylene	844	30	1000	0	84.4	75-125	0			
Toluene	752.5	30	1000	0	75.2	70-125	0			
Xylenes, Total	2451	90	3000	0	81.7	75-125	0			
Surr: 1,2-Dichloroethane-d4	1003	0	1000	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	1044	0	1000	0	104	70-130	0			
Surr: Dibromofluoromethane	958.5	0	1000	0	95.8	70-130	0			
Surr: Toluene-d8	944	0	1000	0	94.4	70-130	0			

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

Client: WPX Energy  
 Work Order: 1706556  
 Project: Sheep Draw 28-Fed 2

## QC BATCH REPORT

Batch ID: 103102 Instrument ID VMS9 Method: SW8260B

MSD				Sample ID: 1706556-01A MSD			Units: µg/Kg-dry		Analysis Date: 6/13/2017 08:31 AM		
Client ID: Sheep Draw 28-Fed 2 S3 Surface				Run ID: VMS9_170612B			SeqNo: 4476502		Prep Date: 6/12/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	850.5	30	1000	0	85	75-125	784	8.14	30		
Ethylbenzene	870	30	1000	0	87	75-125	791.5	9.45	30		
m,p-Xylene	1730	60	2000	0	86.5	80-125	1607	7.4	30		
o-Xylene	887.5	30	1000	0	88.8	75-125	844	5.02	30		
Toluene	816.5	30	1000	0	81.6	70-125	752.5	8.16	30		
Xylenes, Total	2618	90	3000	0	87.3	75-125	2451	6.59	30		
Surr: 1,2-Dichloroethane-d4	998.5	0	1000	0	99.8	70-130	1003	0.45	30		
Surr: 4-Bromofluorobenzene	1028	0	1000	0	103	70-130	1044	1.54	30		
Surr: Dibromofluoromethane	965.5	0	1000	0	96.6	70-130	958.5	0.728	30		
Surr: Toluene-d8	939.5	0	1000	0	94	70-130	944	0.478	30		

The following samples were analyzed in this batch:

1706556-01A 1706556-03A 1706556-05A

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

Client: WPX Energy  
 Work Order: 1706556  
 Project: Sheep Draw 28-Fed 2

# QC BATCH REPORT

Batch ID: 103156 Instrument ID GALLERY Method: A4500-CI E-97

<b>MBLK</b>		Sample ID: <b>MBLK-103156-103156</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/13/2017 01:06 PM</b>		
Client ID:		Run ID: <b>GALLERY_170613B</b>		SeqNo: <b>4476942</b>		Prep Date: <b>6/13/2017</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride ND 10

<b>MS</b>		Sample ID: <b>1706579-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/13/2017 01:06 PM</b>		
Client ID:		Run ID: <b>GALLERY_170613B</b>		SeqNo: <b>4476958</b>		Prep Date: <b>6/13/2017</b>		DF: <b>4</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 1028 40 500 699.2 65.8 75-125 0 S

<b>MSD</b>		Sample ID: <b>1706579-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/13/2017 01:06 PM</b>		
Client ID:		Run ID: <b>GALLERY_170613B</b>		SeqNo: <b>4476959</b>		Prep Date: <b>6/13/2017</b>		DF: <b>4</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 1062 40 499 699.2 72.7 75-125 1028 3.24 25 S

<b>LCS1</b>		Sample ID: <b>LCS1-103156-103156</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/13/2017 01:06 PM</b>		
Client ID:		Run ID: <b>GALLERY_170613B</b>		SeqNo: <b>4476961</b>		Prep Date: <b>6/13/2017</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 106.7 10 100 0 107 80-120 0

<b>LCS2</b>		Sample ID: <b>LCS2-103156-103156</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/13/2017 01:06 PM</b>		
Client ID:		Run ID: <b>GALLERY_170613B</b>		SeqNo: <b>4476962</b>		Prep Date: <b>6/13/2017</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 524.1 10 500 0 105 80-120 0

The following samples were analyzed in this batch:

1706556-01A	1706556-02A	1706556-03A
1706556-04A	1706556-05A	

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

**Client:** WPX Energy  
**Work Order:** 1706556  
**Project:** Sheep Draw 28-Fed 2

## QC BATCH REPORT

Batch ID: **R213818** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R213818</b>				Units: % of sample		Analysis Date: <b>6/13/2017 04:14 PM</b>		
Client ID:		Run ID: <b>MOIST_170613C</b>				SeqNo: <b>4478774</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

<b>LCS</b>		Sample ID: <b>LCS-R213818</b>				Units: % of sample		Analysis Date: <b>6/13/2017 04:14 PM</b>		
Client ID:		Run ID: <b>MOIST_170613C</b>				SeqNo: <b>4478773</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>1706556-04A DUP</b>				Units: % of sample		Analysis Date: <b>6/13/2017 04:14 PM</b>		
Client ID: <b>Sheep Draw 28-Fed 2 S3 6'</b>		Run ID: <b>MOIST_170613C</b>				SeqNo: <b>4478766</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 21.54 0.050 0 0 0 0-0 21.86 1.47 5

The following samples were analyzed in this batch:

1706556-01A	1706556-02A	1706556-03A
1706556-04A	1706556-05A	

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

**WORKORDER**  
#

1706556

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

[illegible]

\*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.**

<b>Comments:</b> <div style="text-align: center; font-size: 2em;"> SR2 4.6 °C </div>	<b>QC PACKAGE (check below)</b>	
	<input checked="" type="checkbox"/> X	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + new data)
	<input type="checkbox"/>	
<b>Preservative Key:</b> 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>Karolina Blaney</i>	Karolina Blaney	6/8/2017	15:00
RECEIVED BY	<i>Diane F. Shea</i>	Diane F. Shea	6/9/17	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				



Sample Receipt Checklist

Client Name: **WPX - NM**

Date/Time Received: **09-Jun-17 09:30**

Work Order: **1706556**

Received by: **DS**

Checklist completed by Diane Shaw 09-Jun-17  
eSignature Date

Reviewed by: Chad Whelton 09-Jun-17  
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>4.6/4.6 c</u> <u>SR2</u>		
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>6/9/2017 11:03:05 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:

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Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: