



Crystal Weaver
Environmental Specialist
NMOCD District II

February 1, 2016

Re: RDX 21-32 workplan for the characterization of impacts – Case # 4041

Dear Ms. Weaver,

The purpose of this letter is to propose a workplan for the characterization of impacts associated with the RDX 21-32 produced water spill which occurred on December 9, 2016.

The impacted area was sampled on 12/16/2016; one grab samples was collected from the pad's surface and one sample was collected from the impacted area west of the access road. 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)	ORO (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Chlorides (mg/kg)
RDX 21-32-1	28	ND	10	ND	ND	ND	ND	20,000
RDX 21-32-2	57	ND	13	ND	ND	ND	ND	15,000

The organic compounds tested below the cleanup thresholds however the chloride concentrations are exceeding OCD's cleanup standards. WPX proposes to delineate the salt impacts by digging two potholes near the sample points and screening soil at various depths until salt concentrations screen below 250 mg/kg for chlorides. Surface samples will be collected outside the impacted area to establish horizontal extent of the impacts. Samples will be screened for chlorides utilizing titration strips. Samples that screen below the OCD's cleanup standards will be sent to a laboratory for confirmation. 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,

A handwritten signature in blue ink that reads "Karolina Blaney".

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



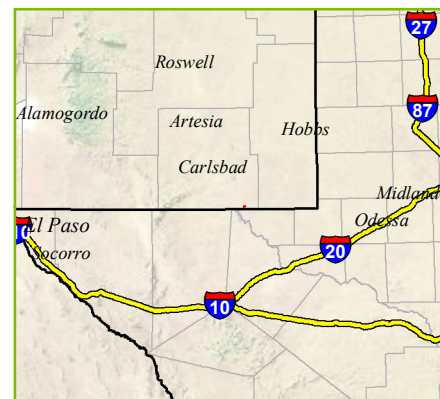
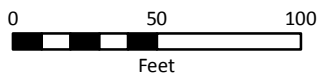
RDX 21-32
Permian Basin



Date: 1/10/2017
Map Scale (at 8.5" x 11"): 1:800
Projection: NAD 1927 UTM Zone 13N
Created By: Jeremy Andarakes
Facilities Engineering Dept - GIS
3500 One Williams Center
Tulsa, OK 74172

Map Symbolology

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





28-Dec-2016

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

Re: **RDX 21-32**

Work Order: **16121114**

Dear Karolina,

ALS Environmental received 2 samples on 20-Dec-2016 12:00 PM 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 14.

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

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy
Project: RDX 21-32
Work Order: 16121114

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>
16121114-01	RDX 21-32-1	Soil		12/16/2016 11:55	12/20/2016 12:00	☐
16121114-02	RDX 21-32-2	Soil		12/16/2016 12:05	12/20/2016 12:00	☐

Client: WPX Energy

Project: RDX 21-32

WorkOrder: 16121114

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
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: 28-Dec-16

Client: WPX Energy
Project: RDX 21-32
Sample ID: RDX 21-32-1
Collection Date: 12/16/2016 11:55 AM

Work Order: 16121114
Lab ID: 16121114-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 12/21/16	Analyst: IT
DRO (C10-C28)	28		5.8	mg/Kg-dry	1	12/21/2016 09:07 PM
ORO (C28-C40)	10		5.8	mg/Kg-dry	1	12/21/2016 09:07 PM
Surr: 4-Terphenyl-d14	69.1		39-133	%REC	1	12/21/2016 09:07 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 12/21/16	Analyst: IT
GRO (C6-C10)	ND		3.5	mg/Kg-dry	1	12/22/2016 06:44 PM
Surr: Toluene-d8	89.4		50-150	%REC	1	12/22/2016 06:44 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 12/21/16	Analyst: LSY
Benzene	ND		0.042	mg/Kg-dry	1	12/22/2016 05:13 AM
Ethylbenzene	ND		0.042	mg/Kg-dry	1	12/22/2016 05:13 AM
m,p-Xylene	ND		0.085	mg/Kg-dry	1	12/22/2016 05:13 AM
o-Xylene	ND		0.042	mg/Kg-dry	1	12/22/2016 05:13 AM
Toluene	ND		0.042	mg/Kg-dry	1	12/22/2016 05:13 AM
Xylenes, Total	ND		0.13	mg/Kg-dry	1	12/22/2016 05:13 AM
Surr: 1,2-Dichloroethane-d4	98.6		70-130	%REC	1	12/22/2016 05:13 AM
Surr: 4-Bromofluorobenzene	97.1		70-130	%REC	1	12/22/2016 05:13 AM
Surr: Dibromofluoromethane	91.5		70-130	%REC	1	12/22/2016 05:13 AM
Surr: Toluene-d8	98.0		70-130	%REC	1	12/22/2016 05:13 AM
CHLORIDE						
			A4500-CL E-97		Prep: EXTRACT / 12/20/16	Analyst: EVB
Chloride	20,000		360	mg/Kg-dry	30	12/20/2016 06:18 PM
MOISTURE						
			SW3550C			Analyst: EDL
Moisture	17		0.050	% of sample	1	12/20/2016 04:25 PM

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

ALS Group, USA

Date: 28-Dec-16

Client: WPX Energy

Project: RDX 21-32

Sample ID: RDX 21-32-2

Collection Date: 12/16/2016 12:05 PM

Work Order: 16121114

Lab ID: 16121114-02

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 12/21/16	Analyst: IT
DRO (C10-C28)	57		5.7	mg/Kg-dry	1	12/21/2016 09:37 PM
ORO (C28-C40)	13		5.7	mg/Kg-dry	1	12/21/2016 09:37 PM
Surr: 4-Terphenyl-d14	65.2		39-133	%REC	1	12/21/2016 09:37 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 12/21/16	Analyst: IT
GRO (C6-C10)	ND		3.2	mg/Kg-dry	1	12/22/2016 03:25 PM
Surr: Toluene-d8	94.3		50-150	%REC	1	12/22/2016 03:25 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 12/21/16	Analyst: LSY
Benzene	ND		0.039	mg/Kg-dry	1	12/22/2016 05:38 AM
Ethylbenzene	ND		0.039	mg/Kg-dry	1	12/22/2016 05:38 AM
m,p-Xylene	ND		0.078	mg/Kg-dry	1	12/22/2016 05:38 AM
o-Xylene	ND		0.039	mg/Kg-dry	1	12/22/2016 05:38 AM
Toluene	ND		0.039	mg/Kg-dry	1	12/22/2016 05:38 AM
Xylenes, Total	ND		0.12	mg/Kg-dry	1	12/22/2016 05:38 AM
Surr: 1,2-Dichloroethane-d4	96.8		70-130	%REC	1	12/22/2016 05:38 AM
Surr: 4-Bromofluorobenzene	95.4		70-130	%REC	1	12/22/2016 05:38 AM
Surr: Dibromofluoromethane	90.1		70-130	%REC	1	12/22/2016 05:38 AM
Surr: Toluene-d8	97.8		70-130	%REC	1	12/22/2016 05:38 AM
CHLORIDE						
			A4500-CL E-97		Prep: EXTRACT / 12/20/16	Analyst: EVB
Chloride	15,000		340	mg/Kg-dry	30	12/20/2016 06:18 PM
MOISTURE						
			SW3550C			Analyst: EDL
Moisture	13		0.050	% of sample	1	12/20/2016 04:25 PM

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

Client: WPX Energy
Work Order: 16121114
Project: RDX 21-32

QC BATCH REPORT

Batch ID: **96085** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-96085-96085				Units: mg/Kg		Analysis Date: 12/21/2016 01:42 PM		
Client ID:		Run ID: GC8_161221A				SeqNo: 4214507		Prep Date: 12/21/2016		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								
ORO (C28-C40)	ND	5.0								
Surr: 4-Terphenyl-d14	2.198	0	3.33	0	66	39-133	0			

LCS		Sample ID: DLCSS1-96085-96085				Units: mg/Kg		Analysis Date: 12/21/2016 02:12 PM		
Client ID:		Run ID: GC8_161221A				SeqNo: 4214508		Prep Date: 12/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	328.8	5.0	333	0	98.7	61-109	0			
ORO (C28-C40)	353.9	5.0	333	0	106	61-119	0			
Surr: 4-Terphenyl-d14	2.346	0	3.33	0	70.5	39-133	0			

MS		Sample ID: 16121044-01A MS				Units: mg/Kg		Analysis Date: 12/22/2016 10:42 A		
Client ID:		Run ID: GC8_161222A				SeqNo: 4215674		Prep Date: 12/21/2016		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	635.2	25	329.2	887.8	-76.7	48-110	0			S
ORO (C28-C40)	496.5	25	329.2	526.7	-9.17	39-140	0			S
Surr: 4-Terphenyl-d14	1.829	0	3.292	0	55.6	39-133	0			

MSD		Sample ID: 16121044-01A MSD				Units: mg/Kg		Analysis Date: 12/22/2016 11:12 A		
Client ID:		Run ID: GC8_161222A				SeqNo: 4215675		Prep Date: 12/21/2016		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	816.3	24	326.1	887.8	-21.9	48-110	635.2	25	30	S
ORO (C28-C40)	556.9	24	326.1	526.7	9.26	39-140	496.5	11.5	30	S
Surr: 4-Terphenyl-d14	1.528	0	3.261	0	46.8	39-133	1.829	17.9	30	

The following samples were analyzed in this batch:

16121114-01A	16121114-02A
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Client: WPX Energy
 Work Order: 16121114
 Project: RDX 21-32

QC BATCH REPORT

Batch ID: **96115** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-96115-96115				Units: µg/Kg-dry		Analysis Date: 12/22/2016 01:47 PM		
Client ID:		Run ID: GC9_161222B				SeqNo: 4216067		Prep Date: 12/21/2016		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	4554	0	5000	0	91.1	50-150	0			

LCS		Sample ID: LCS-96115-96115				Units: µg/Kg-dry		Analysis Date: 12/22/2016 01:22 PM		
Client ID:		Run ID: GC9_161222B				SeqNo: 4216066		Prep Date: 12/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	559300	2,500	500000	0	112	70-130	0			
Surr: Toluene-d8	5418	0	5000	0	108	50-150	0			

MS		Sample ID: 16121114-02A MS				Units: µg/Kg-dry		Analysis Date: 12/22/2016 03:50 PM		
Client ID: RDX 21-32-2		Run ID: GC9_161222B				SeqNo: 4216069		Prep Date: 12/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	660800	3,200	649400	0	102	70-130	0			
Surr: Toluene-d8	6901	0	6494	0	106	50-150	0			

MSD		Sample ID: 16121114-02A MSD				Units: µg/Kg-dry		Analysis Date: 12/22/2016 04:14 PM		
Client ID: RDX 21-32-2		Run ID: GC9_161222B				SeqNo: 4216070		Prep Date: 12/21/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	706100	3,200	649400	0	109	70-130	660800	6.62	30	
Surr: Toluene-d8	6847	0	6494	0	105	50-150	6901	0.794	30	

The following samples were analyzed in this batch:

16121114-01A	16121114-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy
 Work Order: 16121114
 Project: RDX 21-32

QC BATCH REPORT

Batch ID: **96105** Instrument ID **VMS8** Method: **SW8260B**

MBLK Sample ID: MBLK-96105-96105				Units: µg/Kg-dry			Analysis Date: 12/21/2016 12:25 PM			
Client ID:		Run ID: VMS8_161221A		SeqNo: 4214074		Prep Date: 12/21/2016		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	966.5	0	1000	0	96.6	70-130	0			
Surr: 4-Bromofluorobenzene	955.5	0	1000	0	95.6	70-130	0			
Surr: Dibromofluoromethane	860	0	1000	0	86	70-130	0			
Surr: Toluene-d8	976.5	0	1000	0	97.6	70-130	0			

LCS Sample ID: LCS-96105-96105				Units: µg/Kg-dry			Analysis Date: 12/21/2016 10:48 A			
Client ID:		Run ID: VMS8_161221A		SeqNo: 4214073		Prep Date: 12/21/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	934.5	30	1000	0	93.4	75-125	0			
Ethylbenzene	980.5	30	1000	0	98	75-125	0			
m,p-Xylene	1955	60	2000	0	97.8	80-125	0			
o-Xylene	970.5	30	1000	0	97	75-125	0			
Toluene	952	30	1000	0	95.2	70-125	0			
Xylenes, Total	2926	90	3000	0	97.5	75-125	0			
Surr: 1,2-Dichloroethane-d4	963.5	0	1000	0	96.4	70-130	0			
Surr: 4-Bromofluorobenzene	986.5	0	1000	0	98.6	70-130	0			
Surr: Dibromofluoromethane	1008	0	1000	0	101	70-130	0			
Surr: Toluene-d8	959	0	1000	0	95.9	70-130	0			

MS Sample ID: 16121114-02A MS				Units: µg/Kg-dry			Analysis Date: 12/22/2016 06:52 A			
Client ID: RDX 21-32-2		Run ID: VMS9_161221B		SeqNo: 4214566		Prep Date: 12/21/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1229	39	1299	0	94.6	75-125	0			
Ethylbenzene	1285	39	1299	0	98.9	75-125	0			
m,p-Xylene	2649	78	2598	0	102	80-125	0			
o-Xylene	1331	39	1299	0	102	75-125	0			
Toluene	1227	39	1299	0	94.5	70-125	0			
Xylenes, Total	3980	120	3897	0	102	75-125	0			
Surr: 1,2-Dichloroethane-d4	1234	0	1299	0	95	70-130	0			
Surr: 4-Bromofluorobenzene	1322	0	1299	0	102	70-130	0			
Surr: Dibromofluoromethane	1284	0	1299	0	98.8	70-130	0			
Surr: Toluene-d8	1262	0	1299	0	97.2	70-130	0			

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

Client: WPX Energy
 Work Order: 16121114
 Project: RDX 21-32

QC BATCH REPORT

Batch ID: **96105** Instrument ID **VMS8** Method: **SW8260B**

MSD				Sample ID: 16121114-02A MSD			Units: µg/Kg-dry		Analysis Date: 12/22/2016 07:16 A	
Client ID: RDX 21-32-2				Run ID: VMS9_161221B			SeqNo: 4214567		Prep Date: 12/21/2016	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1200	39	1299	0	92.4	75-125	1229	2.41	30	
Ethylbenzene	1286	39	1299	0	99	75-125	1285	0.101	30	
m,p-Xylene	2660	78	2598	0	102	80-125	2649	0.416	30	
o-Xylene	1315	39	1299	0	101	75-125	1331	1.23	30	
Toluene	1223	39	1299	0	94.2	70-125	1227	0.371	30	
Xylenes, Total	3975	120	3897	0	102	75-125	3980	0.131	30	
Surr: 1,2-Dichloroethane-d4	1228	0	1299	0	94.6	70-130	1234	0.475	30	
Surr: 4-Bromofluorobenzene	1348	0	1299	0	104	70-130	1322	1.95	30	
Surr: Dibromofluoromethane	1285	0	1299	0	98.9	70-130	1284	0.0506	30	
Surr: Toluene-d8	1308	0	1299	0	101	70-130	1262	3.54	30	

The following samples were analyzed in this batch:

16121114-01A	16121114-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy
 Work Order: 16121114
 Project: RDX 21-32

QC BATCH REPORT

Batch ID: 96069 Instrument ID GALLERY Method: A4500-CI E-97

MBLK		Sample ID: MBLK-96069-96069				Units: mg/Kg		Analysis Date: 12/20/2016 06:18 PM		
Client ID:		Run ID: GALLERY_161220B		SeqNo: 4213316		Prep Date: 12/20/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride ND 10

MS		Sample ID: 1612798-01A MS				Units: mg/Kg		Analysis Date: 12/20/2016 06:18 PM		
Client ID:		Run ID: GALLERY_161220B		SeqNo: 4213320		Prep Date: 12/20/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 511.6 10 498 29.46 96.8 75-125 0

MSD		Sample ID: 1612798-01A MSD				Units: mg/Kg		Analysis Date: 12/20/2016 06:18 PM		
Client ID:		Run ID: GALLERY_161220B		SeqNo: 4213321		Prep Date: 12/20/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 570.9 9.9 496 29.46 109 75-125 511.6 11 25

LCS1		Sample ID: LCS1-96069-96069				Units: mg/Kg		Analysis Date: 12/20/2016 06:18 PM		
Client ID:		Run ID: GALLERY_161220B		SeqNo: 4213322		Prep Date: 12/20/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 104.9 10 100 0 105 80-120 0

LCS2		Sample ID: LCS2-96069-96069				Units: mg/Kg		Analysis Date: 12/20/2016 06:18 PM		
Client ID:		Run ID: GALLERY_161220B		SeqNo: 4213323		Prep Date: 12/20/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chloride 508.9 10 500 0 102 80-120 0

The following samples were analyzed in this batch:

16121114-01A	16121114-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy
Work Order: 16121114
Project: RDX 21-32

QC BATCH REPORT

Batch ID: **R202899** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R202899				Units: % of sample		Analysis Date: 12/20/2016 04:25 PM		
Client ID:		Run ID: MOIST_161220C				SeqNo: 4212518		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-R202899				Units: % of sample			Analysis Date: 12/20/2016 04:25 PM		
Client ID:				Run ID: MOIST_161220C				SeqNo: 4212517		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: 16121044-07A DUP				Units: % of sample			Analysis Date: 12/20/2016 04:25 PM			
Client ID:				Run ID: MOIST_161220C				SeqNo: 4212497			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 22.48 0.050 0 0 0 23.19 3.11 5

DUP				Sample ID: 16121059-01A DUP				Units: % of sample			Analysis Date: 12/20/2016 04:25 PM			
Client ID:				Run ID: MOIST_161220C				SeqNo: 4212501			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 6.52 0.050 0 0 0 6.26 4.07 5

The following samples were analyzed in this batch:

16121114-01A	16121114-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r6

WORKORDER #

16121114

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

RDX 21-32

SAMPLER

SITE ID

RDX 21-32

DATE

12/16/2016

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

TPH DRO GRO ORO

BTEX 8260

Chloride

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

1

RDX 21-32-1

S

12/16/2016

11:55

1

8

x

x

x

x

2

RDX 21-32-2

S

12/16/2016

12:05

1

8

x

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:

SR2 2.8°C

QC PACKAGE (check below)

☒ LEVEL II (Standard QC)
☐ LEVEL III (Std QC + forms)
☐ LEVEL IV (Std QC + forms + new 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

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Karolina Blaney

Karolina Blaney

12/16/2016

15:00

Diane E. Shaw 12/20/16 12:00

252

FedEx
ExpressPackage
US AirbillFedEx
Tracking
Number

8108 0927 4948

1 From

Date

12/16/16

Sender's
Name

KAROLINA BLANEY

Phone

970 589 0743

Company

WPX ENERGY

Address

5315 BUENA VISTA DR

Dept./Floor/Building

City

CARLSBAD

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

Dept./Floor/Building

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City HOLLAND

State MI

ZIP

49424-9263

0124717978



8108 0927 4948

Form
FD No. 0215

Recipient's Copy

4 Express Package Service

*To most locations

Packages up to 150 lbs.
For packages over 150 lbs., see the
FedEx Express Freight (EX) Airbill

Next Business Day

☐ FedEx First Overnight
Earliest next business morning delivery to select
locations. Friday shipments will be delivered on
Monday unless Saturday Delivery is selected.☒ FedEx Priority Overnight
Next business morning. Friday shipments will be
delivered on Monday unless Saturday Delivery
is selected.☐ FedEx Standard Overnight
Next business afternoon.
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

*Standard value limit \$500

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

6 Special Handling and Delivery Signature Options

Types vary by service. 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
Signature at recipient's address
may 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?

One box must be checked.

☒ No☐ YesAs per attached
Shipper's Declaration.☐ YesShipper's Declaration
not required.☐ Dry Ice
Dry Ice & LIH bags☐ Cargo Aircraft Only

7 Payment B/E for

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

Obtain recip.
Acct. No.☐ Sender
Acct. No. in Section
1 will be billed.☒ Recipient☐ Third Party☐ Credit Card☐ Cash/Check

Total Packages

Total Weight

Credit Card Acct.

*For liability is limited to US\$500 unless you declare a higher value. See the current FedEx Service Guide for details.



fedex.com 1-800-GO-FED-EX 1-800-463-3339

Sample Receipt Checklist

Client Name: **WPX - NM**

Date/Time Received: **20-Dec-16 12:00**

Work Order: **16121114**

Received by: **DS**

Checklist completed by Diane Shaw
eSignature

20-Dec-16
Date

Reviewed by: Chad Whelton
eSignature

21-Dec-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>2.8/2.8 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>12/20/2016 1:14:15 PM</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: