

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2019548894
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Lynda Laumbach	Contact Telephone: (575) 725-1647
Contact email: Lynda.Laumbach@wpxenergy.com	Incident # (assigned by OCD)
Contact mailing address: 5315 Buena Vista Drive, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.041235 Longitude -103.9018005
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RDX 17 Federal Com #006H	Site Type: Production Facility
Date Release Discovered: 07/05/2020	API# (if applicable): 30-015-39308

Unit Letter	Section	Township	Range	County
J	17	26S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 35	Volume Recovered (bbls): 5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

At 0830 hours PW polyline connection failed causing an estimated 35bbl of PW to be released along recently reclaimed lease road for RDX 17-13. 5bbl of PW was recovered.

$$bbl\ estimate = \frac{saturated\ soil\ volume\ (ft^3)}{4.21(\frac{ft^3}{bbl\ equivalent})} * estimated\ soil\ porosity(\%)$$

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release was over 25bbl of fluid.
---	--

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
 Email notification was sent to Mike Bratcher, Robert Hamlet, Victoria Venegas, and Jim Griswold on 07/05/2020 at 1640 hours.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
--

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Lynda Laumbach Title: Environmental Specialist
 Signature:  Date: 07/06/2020
 email: Lynda.Laumbach@wpenergy.com Telephone: (575)725-1647

OCD Only
 Received by: Ramona Marcus Date: 7/13/2020

Incident ID	NRM2019548894
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Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NRM201954889
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Lynda Laumbach Title: Environmental Specialist
Signature:  Date: 03/23/2021
email: Lynda.Laumbach@wpenergy.com Telephone: (575)725-1647

OCD Only

Received by: Cristina Eads Date: 04/19/2021

Incident ID	NRM201954889
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: Each of the following items must be included in the plan.

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

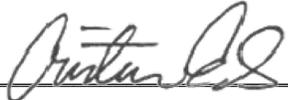
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public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

Printed Name: Lynda Laumbach Title: Environmental Specialist
 Signature:  Date: 03/23/2021
 email: Lynda.Laumbach@wpenergy.com Telephone: (575)725-1647

OCD Only

Received by: Cristina Eads Date: 04/19/2021

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature:  Date: 07/21/2021



March 23, 2021
Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210

Re: RDX 17 Federal Com #006H Remediation Plan (NRM2019548894)

Mr. Bratcher,

This report summarizes the remediation activities and proposed plan for remediation and closure of the Incident at the RDX 17 Federal Com #006H well pad (Site). The topographic map of the Site is provided as Figure 01. On July 5, 2020, a produced water line cracked releasing 35 barrels (bbls) of produced water along recently reclaimed lease road for RDX 17-13. 5bbl of PW was recovered using a vacuum truck.

Well Location: RDX 17 Federal Com #006H

API #: 30-015-39308

NMOCD Reference #: NRM2019548894

Site Location Description: Unit Letter J, Section 17, Township 26S, Range 30E

Release Latitude/Longitude: N32.041235, W103.9018005

Land Jurisdiction: Federal

Estimated Depth to Groundwater: >100 feet

NMOCD Site Characterization Standards

The Closure criteria of this site was determined based on the New Mexico Administrative Code (NMAC) Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12). The Site is not located within a sensitive area. Depth to groundwater at the site is estimated to be greater than 100 feet below ground surface (bgs) based on a depth to water drill at the RDX Federal 17 #044H, located ~0.56 miles north of the location, drilled on December 12, 2020. The well was completed to a depth of 105 feet, and groundwater was not encountered or observed prior to the plugging of the well on December 15, 2020. Well log is provided as Attachment 01. Based on the criteria outlined above, the closure criteria from the NMOCD Table 1 are as follows:

- 20,000 milligrams per kilogram (mg/kg) Chloride
- 50 mg/kg Benzene, Toluene, Ethylbenzene, and xylenes (BTEX)
- 10 mg/kg Benzene
- 2,500 mg/kg Total Petroleum Hydrocarbons (TPH)
- 1,000 mg/kg Diesel range organics (DRO) + Gasoline range organics (GRO)

Field Activities

On July 16, 2020, WPX personnel were onsite to confirm the release extent and collect delineation samples DS01-DS07. The area of interest is located on Figure 02. Further Surface samples SS01-SS12 were collected on March 16, 2021 to laterally delineate the release for chloride contamination.

Sampling Activities

Discrete samples were taken to delineate the area outside of the release extent. All samples were taken with decontaminated equipment, jarred in precleaned glass soil jars, labelled with sample name, date, Site name, and depth, and immediately placed on ice to lower sample temperatures below 4° Celsius, adhering to chain of custodies of Hall and Xenco Laboratories. Samples were analyzed for Chlorides via Method EPA 300.0, TPH via Method 8015M, and BTEX via Method 8021B.

Laboratory Analytical Results

The laboratory analytical results for the delineation samples DS01-DS07 were above the Standard threshold for chlorides. In addition, samples SS04, SS05, SS08, and SS12 showed elevated chlorides. The sample locations are depicted in Figure 02. All sample results are summarized in Table 01 and complete lab results are provided in Attachment 02. Results for samples analyzed for BTEX and TPH confirmed no detectable levels. Chloride analysis ranged from 57.8 mg/kg to 37,000 mg/kg.

Proposed Workplan

WPX plans on excavating an estimated 1,700 cubic yards to 2,200 cubic yards to address the release. The proposed excavation area is outlined in Figure 03. This number is contingent on an average depth of four feet with contamination greater than 600 mg/kg chlorides. To fully delineate the release, bore locations will be advanced at BH01-BH03 to collect vertical delineations. Complete lateral delineations will be achieved via side wall samples once the excavation has been completed. WPX also proposes to lay down an impermeable layer at four feet bgs to mitigate any further contamination migration into the subsurface.

All samples will be analyzed for Chlorides via Method EPA 300.0, TPH via Method 8015M, and BTEX via Method 8021B. All contaminated soil will be hauled to disposal at R-360 Red Bluff Facility, 5053 US Hwy 285, Orla, TX 79770.

Proposed Schedule

WPX plans to start this project as soon as this remediation plan is approved or by June 21, 2021 whichever comes first. An extension request or Incident Closure report will be submitted after 90 days of this remediation approval. If any questions or further information is warranted, please do not hesitate to contact me by cell phone at (575) 725-1647 or by email at Lynda.Laumbach@wpxenergy.com.

Best regards,



Lynda Laumbach
Environmental Specialist

CC: Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Chad Hensley, NMOCD

Attachments:

Figure 01 Topography

Figure 02 Delineation Samples

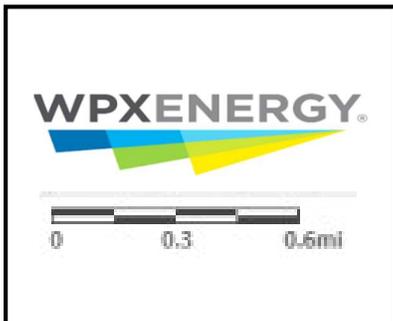
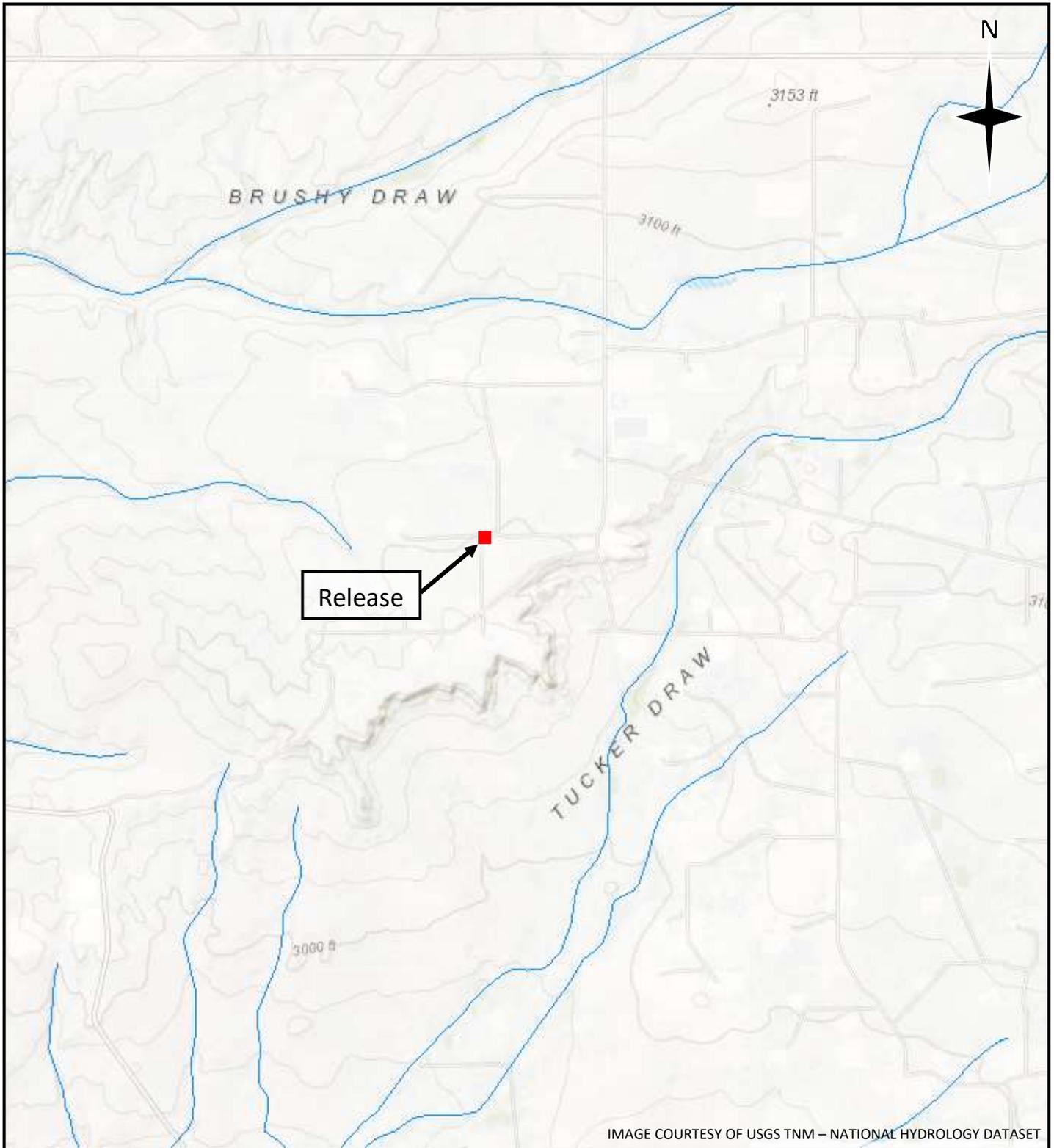
Figure 03 Remediation Plan

Table 01 Soil Sample Results

Attachment 01 Water Well Data

Attachment 02 Analytical Results

Figures



Legend

- Release Location
- ▬ OSE Water Body

Figure 01
RDX 17 Federal Com #006H
30-015-39308
Permian Basin, Eddy County, NM
32.041235, -103.9018005
Date: 07/7/2020

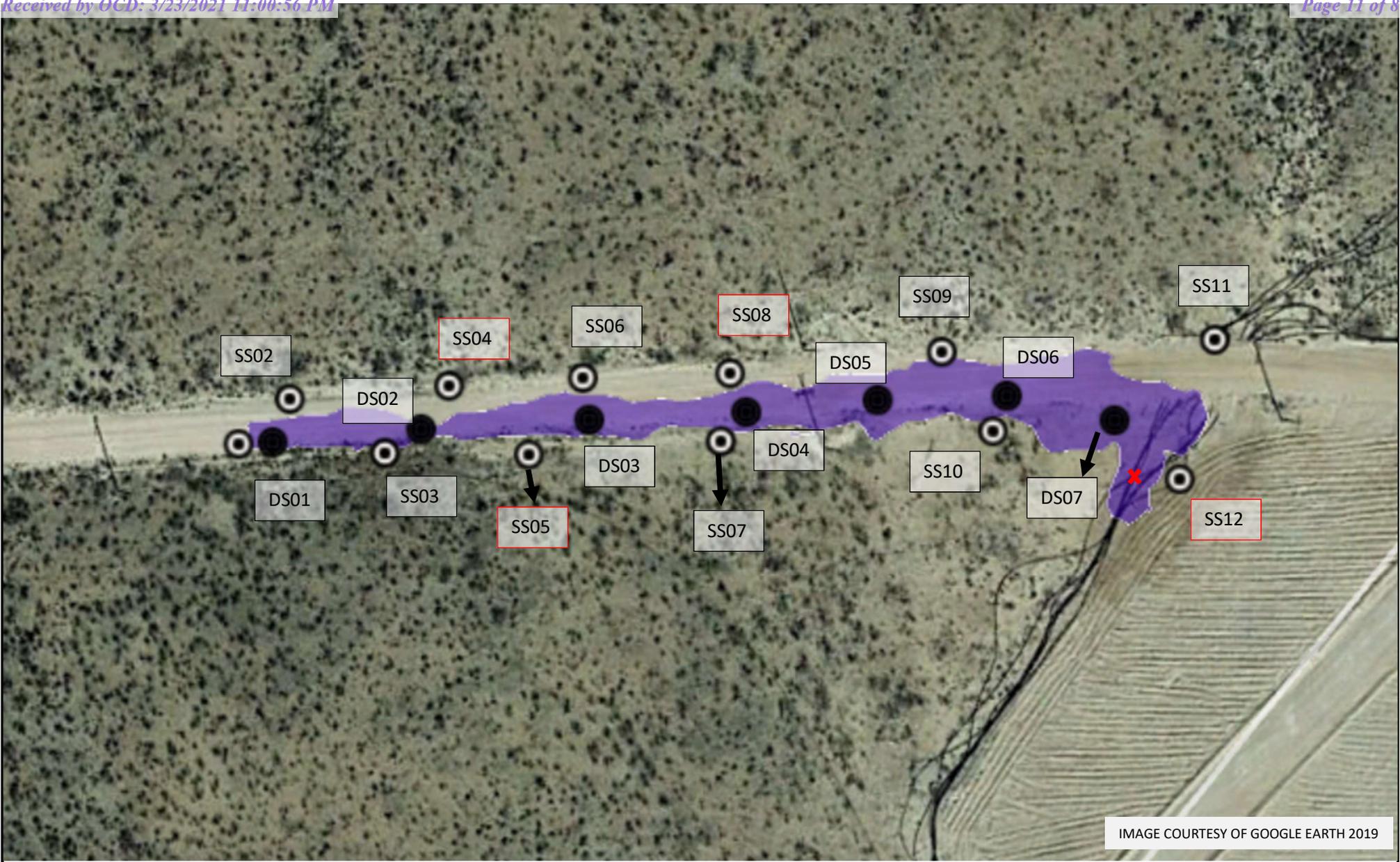


IMAGE COURTESY OF GOOGLE EARTH 2019



Legend

- ✘ Point of Release
- Release Extent (8,785 sq. feet)

Figure 02
 RDX 17 Federal Com #006H
 30-015-39308
 NRM2019548894
 Permian Basin, Eddy County, NM
 32.041235, -103.9018005

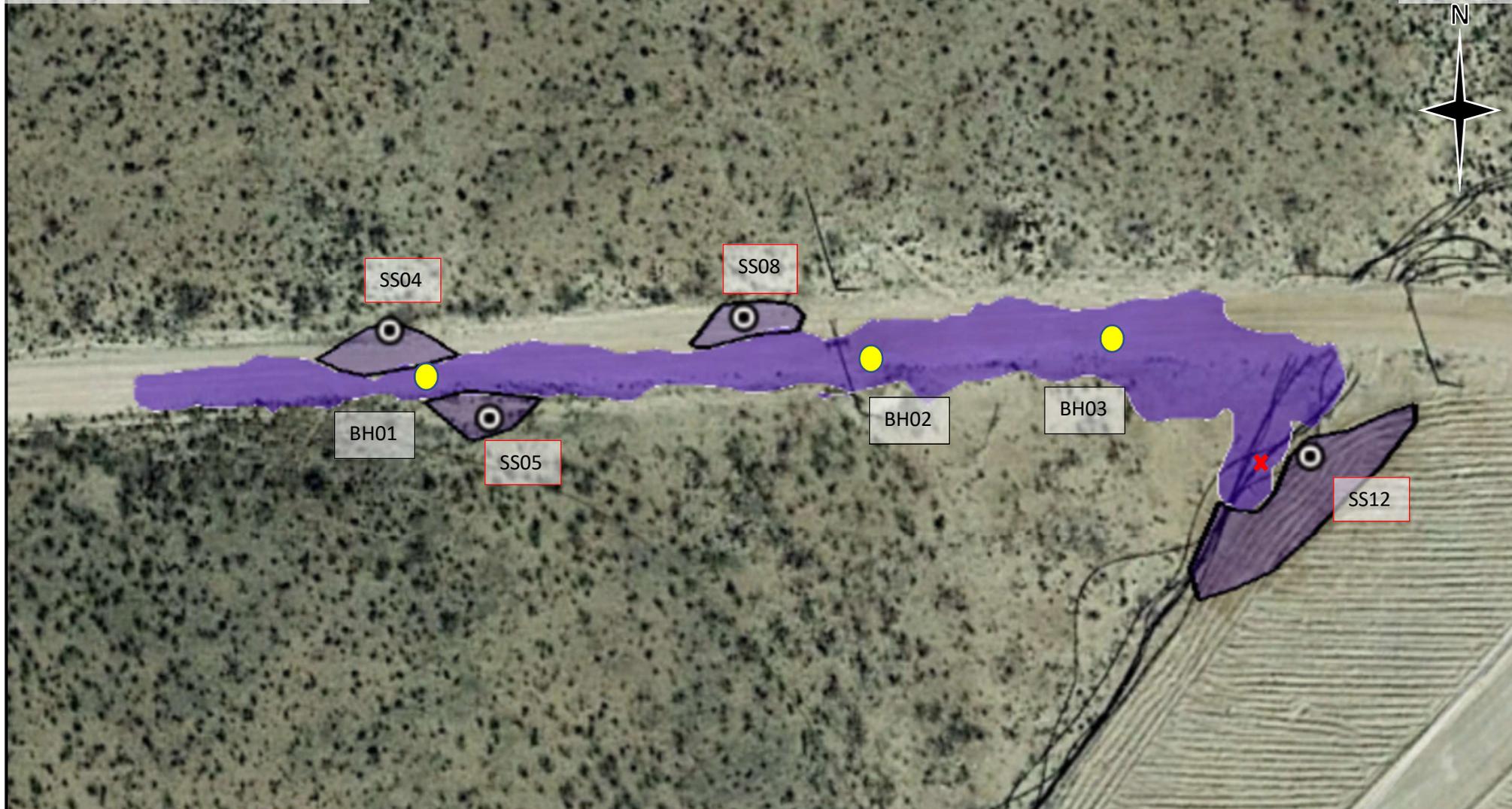


IMAGE COURTESY OF GOOGLE EARTH 2019



Legend

- ✘ Point of Release
- Release Extent (8,785 sq. feet)
- Additional Area (2,966 sq. feet)

Figure 03
 RDX 17 Federal Com #006H
 30-015-39308
 NRM2019548894
 Permian Basin, Eddy County, NM
 32.041235, -103.9018005

Tables



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
RDX 17 Federal #006H
NMOCD REFERENCE NUMBER: NRM2019548894

Sample Name	Depth (ft bgs)	Sample Date	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	GRO + DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
DS01	2	7/16/2020	-	-	-	-	-	-	-	8340
DS01A	4	7/16/2020	-	-	-	-	-	-	-	723
DS02	2	7/16/2020	-	-	-	-	-	-	-	4700
DS02A	4	7/16/2020	-	-	-	-	-	-	-	1430
DS03	2	7/16/2020	-	-	-	-	-	-	-	26700
DS03A	4	7/16/2020	-	-	-	-	-	-	-	30900
DS03B	6	7/16/2020	-	-	-	-	-	-	-	32700
DS03C	8	7/16/2020	-	-	-	-	-	-	-	27200
DS03D	10	7/16/2020	-	-	-	-	-	-	-	28400
DS04	2	7/16/2020	-	-	-	-	-	-	-	26900
DS04A	4	7/16/2020	-	-	-	-	-	-	-	23500
DS04B	6	7/16/2020	-	-	-	-	-	-	-	13800
DS04C	10	7/16/2020	-	-	-	-	-	-	-	16000
DS05	2	7/16/2020	-	-	-	-	-	-	-	26000
DS05A	4	7/16/2020	-	-	-	-	-	-	-	24300
DS05B	6	7/16/2020	-	-	-	-	-	-	-	24800
DS05C	10	7/16/2020	-	-	-	-	-	-	-	24500
DS06	2	7/16/2020	-	-	-	-	-	-	-	18800
DS06A	4	7/16/2020	-	-	-	-	-	-	-	34600
DS06B	6	7/16/2020	-	-	-	-	-	-	-	37900
DS06C	10	7/16/2020	-	-	-	-	-	-	-	28400
DS07	2	7/16/2020	-	-	<49.8	<49.8	<49.8	-	-	26300
DS07A	4	7/16/2020	-	-	<49.9	<49.9	<49.9	-	-	22500
DS07B	6	7/16/2020	-	-	-	-	-	-	-	23100
DS07C	10	7/16/2020	-	-	-	-	-	-	-	23800
SS01	0.5	3/16/2021	-	-	-	-	-	-	-	379
SS02	0.5	3/16/2021	-	-	-	-	-	-	-	440
SS03	0.5	3/16/2021	-	-	-	-	-	-	-	57.8
SS04	0.5	3/16/2021	-	-	-	-	-	-	-	888
SS05	0.5	3/16/2021	-	-	-	-	-	-	-	1060
SS06	0.5	3/16/2021	-	-	-	-	-	-	-	273
SS07	0.5	3/16/2021	-	-	-	-	-	-	-	518
SS08	0.5	3/16/2021	-	-	-	-	-	-	-	707
SS09	0.5	3/16/2021	-	-	-	-	-	-	-	125
SS10	0.5	3/16/2021	-	-	-	-	-	-	-	347
SS11	0.5	3/16/2021	-	-	-	-	-	-	-	368
SS12	0.5	3/16/2021	-	-	-	-	-	-	-	1350
NMOCD Table 1 Closure Criteria			10	50	NE	NE	NE	1000	2500	20000
Reference: BTEX: benzene, toluene, ethylbenzene, and total xylenes GRO: gasoline range organics DRO: diesel range organics ft bgs: feet below ground surface NMOCD Table 1 Closure Criteria: NMAC 19.15.29 August 2018 criteria for soils impacted based on characterization mg/kg: milligrams per kilogram NMOCD: New Mexico Oil Conservation Division TPH: total petroleum hydrocarbons										

Attachment 01: Water Well Data



Site Investigation Report

Date of report: 1/5/2021
 Site Names: RDX 16-25 Ross Draw Unit #38
 RDX 17 #3 Ross Draw Unit #55
 RDX Fed Com 17-44H Ross Draw Unit #57
 RDX Fed Com 21-43 N Brushy Fed 35 #010H
 County: Eddy County, New Mexico
 Project No: 0397

Site Activities

Earth Systems Response and Restoration (ESRR) field activities were conducted December 8th through the 10th in Eddy county, New Mexico. ESRR oversaw the advancement of one soil boring at the eight above-mentioned locations to an approximate depth of 105 feet (ft.) below grade surface utilizing an air-rotary drilling rig operated by a State of New Mexico licensed driller. Additionally, HRL Compliance Solutions (HRL) conducted on-site soil logging activities during the advancement of the soil borings. Please see the detailed lithologic descriptions attached.

Upon completion of the soil borings, a PVC casing fitted with 5 ft. of machine-slotted well screen at the bottom was inserted into each soil boring. The PVC casing was left in place for a minimum of 72 hours prior to being gauged by HRL Consulting on December 12th with a water level meter to determine the presence or absence of groundwater. Subsequent to gauging activities, each soil boring had the PVC casing removed and was then backfilled with its associated native soil cuttings to grade surface.

Conclusions

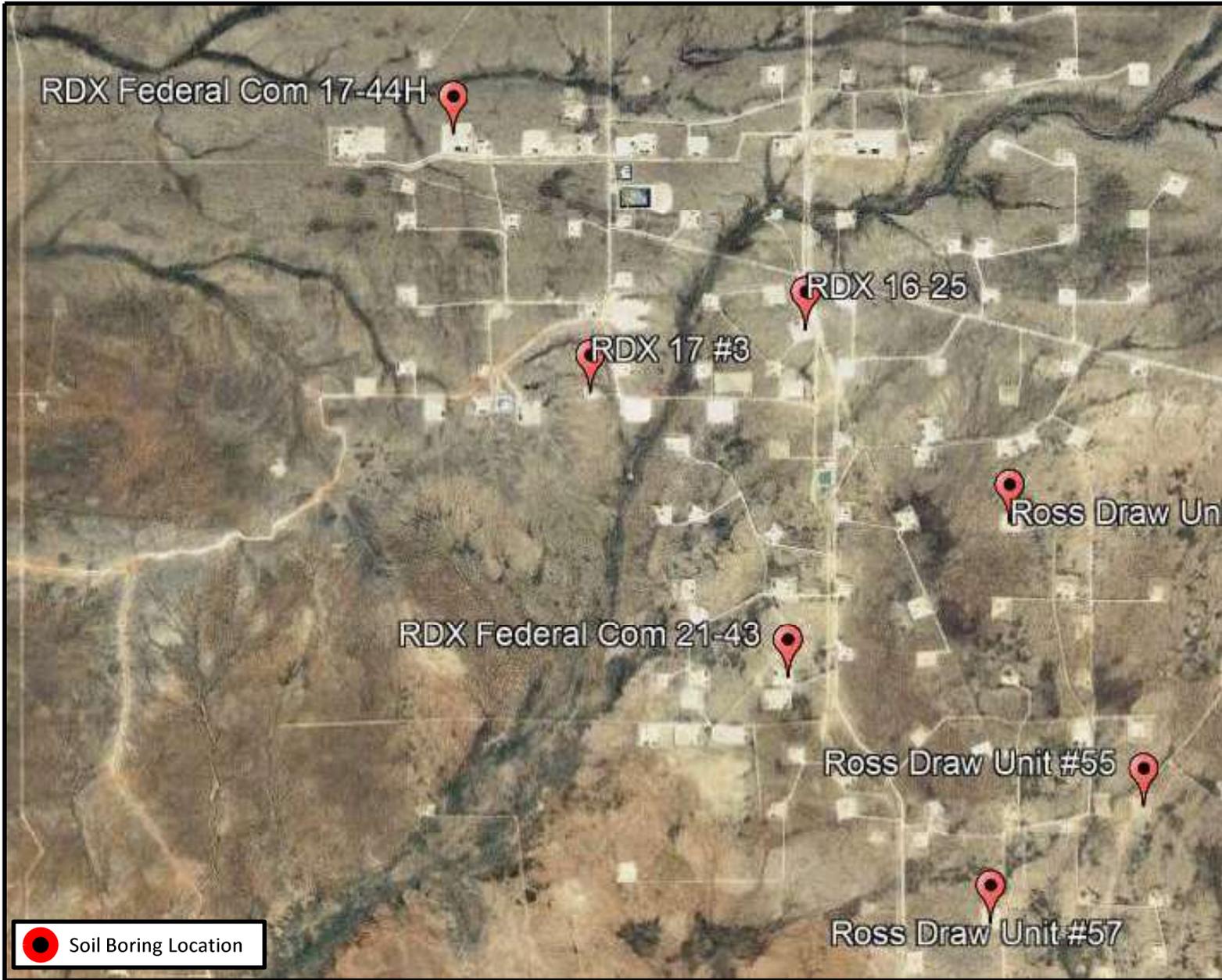
Groundwater was not detected in any of the eight soil borings as determined by utilizing a water level meter after 72 hours of development. It can be reasonably determined groundwater is deeper than 105 ft. bgs in the vicinity of the advanced soil borings.

Respectfully,

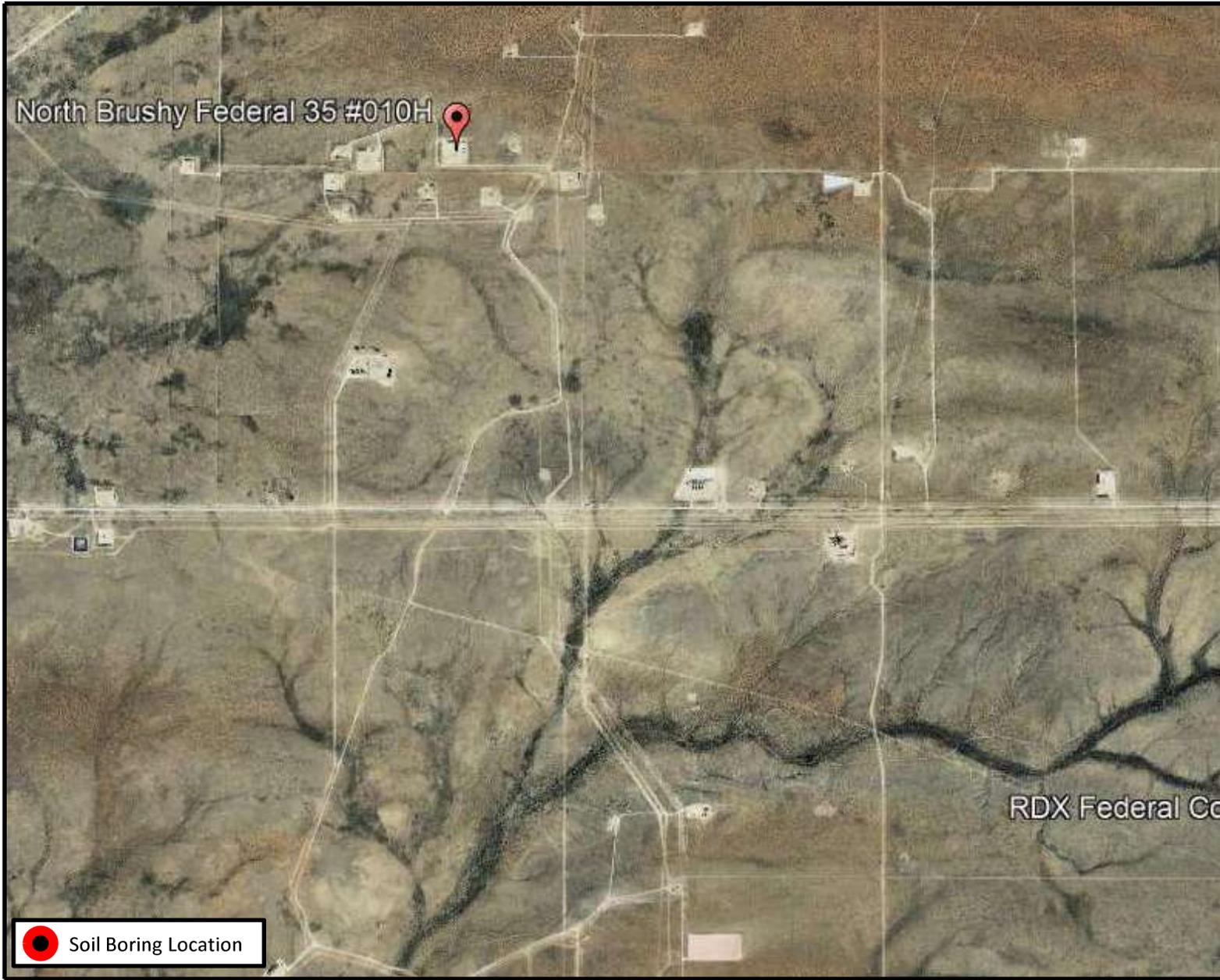
K. Williams

Kris Williams, CHMM, REM
Operations Manager

Attached: Drilling Locations Maps
Soil Boring Logs



Drilling Location Site Map		
RDX 16-25	(32.039900, -103.883337)	Ross Draw Unit #38
RDX 17 #3	(32.036765, -103.895993)	Ross Draw Unit #55
RDX Federal Com 17-44H	(32.049656, -103.904054)	Ross Draw Unit #57
RDX Federal Com 21-43	(32.022571, -103.884371)	



Drilling Location Site Map	
North Brushy Federal 35 #010H	(32.079909, -103.951386)
RDX Federal Com 17-44H	(32.049656, -103.904054)

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
Boring/Well Number: MW-1							Location: RDX 16-25						
Date: 12/10/2020							Client: WPX Energy						
Drilling Method: Air Rotary			Sampling Method: None				Logged By: J. Linn, PG			Drilled By: Talon LPE			
Gravel Pack Type: 10/20 sand			Gravel Pack Depth Interval: 3 bags				Seal Type: None		Seal Depth Interval: None		Latitude: 32.0399004		
Casing Type: PVC		Diameter: 2-inch		Depth Interval: 0-105 feet bgs			Boring Total Depth (ft. BGS): 110			Longitude: -103.8833368			
Screen Type: PVC		Slot: 0.010-inch		Diameter: 2-inch		Depth Interval: 105-110 ft		Well Total Depth (ft. BGS): 110			Depth to Water (ft. BTOC): > 110	DTW Date: 12/16/2020	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks			Well Completion	
0	NM	L	D	N	N	NM	SW	NS	Pale orange to pink tan well graded sand with silt				
5													
10													
15													
20													
25	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand				
30													
35													
40	NM	L	D	N	N	NM	SW	NS	Orange to pale red well graded sand with gravel				
45													
50	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand				
55													
60	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand with minor medium and coarse sand - TD: 110' bgs				
65													
70													
75													
80													
85													
90													
95													
100													
105													
110													

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
Boring/Well Number:							MW-1		Location:			RDX Federal Com 17-44H	
Date:							12/8/2020		Client:			WPX Energy	
Drilling Method:			Sampling Method:				Logged By:			Drilled By:			
Air Rotary			None				J. Linn, PG			Talon LPE			
Gravel Pack Type:			Gravel Pack Depth Interval:				Seal Type:		Seal Depth Interval:		Latitude:		
10/20 Sand			3 Bags				None		None		32.049656		
Casing Type:		Diameter:		Depth Interval:			Boring Total Depth (ft. BGS):			Longitude:			
PVC		2-inch		0-105 ft bgs			110			-103.904054			
Screen Type:		Slot:		Diameter:		Depth Interval:		Well Total Depth (ft. BGS):			Depth to Water (ft. BTOC):	DTW Date:	
PVC		0.010-inch		2-inch		105 - 110 ft		110			> 110	12/16/2020	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks			Well Completion	
0	NM	L	D	N	N	NM	CE	NS	Buff to pale pink colored caliche				
5													
10													
15													
20													
25													
30	NM	L	D	N	N	NM	SW	NS	Pinky orange well graded sand with minor silt				
35													
40													
45													
50	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt				
55													
60													
65	NM	L	D	N	N	NM	SW-SM SW-SC	NS	Pinky brown orange well-graded sand with silt and clay				
70													
75													
80	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt - TD: 110' bgs				
85													
90													
95	NM	L	D	N	N	NM	SP	NS					
100													
105													

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM																				
Drilling Method: Air Rotary							Sampling Method: None			Boring/Well Number: MW-1			Location: RDX Federal Com 21-43														
Gravel Pack Type: 10/20 Sand							Gravel Pack Depth Interval: 3 Bags			Seal Type: None			Seal Depth Interval: None			Date: 12/9/2020			Client: WPX Energy								
Casing Type: PVC							Diameter: 2-inch			Depth Interval: 0-100 feet bgs			Boring Total Depth (ft. BGS): 110			Logged By: J. Linn, P.G.			Drilled By: Talon LPE			Latitude: 32.022571					
Screen Type: PVC							Slot: 0.010-inch			Diameter: 2-inch			Depth Interval: 100 - 105 ft			Well Total Depth (ft. BGS): 105			Longitude: -103.884371			Depth to Water (ft. BTOC): > 105			DTW Date: 12/16/2020		
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks						Well Completion												
0	NM	L	D	N	N	NM	SP	NS	Pale orange to tan poorly graded fine sand																		
5																											
10																											
15																											
20	NM	H	D	N	N	NM	CL	NS	Pale orange/tan/pale red clay, dry, with silt, fine sand, and minor caliche																		
25																											
30																											
35																											
40																											
45	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand																		
50																											
55																											
60	NM	L	D	N	N	NM	SP	NS	Golden yellow poorly graded fine sand with minor silt and clay																		
65																											
70																											
75	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand with minor silt/clay																		
80																											
85																											
90	NM	M	D	N	N	NM	SC	NS	Buff to orange color fine sand with medium sand and clay																		
95																											
100	NM	H	D	N	N	NM	CL	NS	Brown orange clay with silt and fine sand																		
105																											
	NM	H	D	N	N	NM	SC	NS	Golden yellow and buff colored clay with fine sand - TD Boring: 110' BGS; Sand 110' - 105' BGS																		

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
Boring/Well Number: MW-1							Location: Ross Draw Unit #38						
Date: 12/8/2020							Client: WPX Energy						
Drilling Method: Air Rotary			Sampling Method: None				Logged By: J. Linn, PG			Drilled By: Talon LPE			
Gravel Pack Type: 10/20 Sand			Gravel Pack Depth Interval: 3 Bags				Seal Type: None		Seal Depth Interval: None		Latitude: 32.030300		
Casing Type: PVC		Diameter: 2-inch		Depth Interval: 0-100 feet bgs			Boring Total Depth (ft. BGS): 105			Longitude: -103.871338			
Screen Type: PVC		Slot: 0.010-inch		Diameter: 2-inch		Depth Interval: 100-105 ft		Well Total Depth (ft. BGS): 105			Depth to Water (ft. BTOC): > 105	DTW Date: 12/16/2020	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks			Well Completion	
0	NM	L	D	N	N	NM	SW	NS	Pale orange/pale pink to buff colored fine sand with minor medium and coarse sand				
5													
10													
15													
20	NM	L	D	N	N	NM	SP	NS	Pale orange/pale pink poorly graded fine sand				
25													
30													
35	NM	L	D	N	N	NM	SP	NS	Tan/pale brown/pale orange poorly graded fine sand				
40													
45													
50													
55													
60													
65	NM	L	D	N	N	NM	SP	NS	Brick red brown poorly graded fine sand				
70													
75													
80													
85													
90	NM	L	D	N	N	NM	SP	NS	Tan/pale brown/pale orange poorly graded fine sand - TD 105' BGS				
95													
100	NM	L	D	N	N	NM	SP	NS					

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM										
Drilling Method: Air Rotary							Sampling Method: None		Boring/Well Number: MW-1			Location: Ross Draw Unit #55					
Gravel Pack Type: 10/20 Sand							Gravel Pack Depth Interval: 3 Bags		Seal Type: None		Seal Depth Interval: None		Date: 12/9/2020		Client: WPX Energy		
Casing Type: PVC			Diameter: 2-inch		Depth Interval: 0-101'7"		Boring Total Depth (ft. BGS): 106'7"			Logged By: J. Linn, PG			Drilled By: Talon LPE		Latitude: 32.016165		
Screen Type: PVC			Slot: 0.010-inch		Diameter: 2-inch		Depth Interval: 101'7" - 106'7"		Well Total Depth (ft. BGS): 106'7"			Depth to Water (ft. BTOC): >106' 7"		DTW Date: 12/16/2020		Longitude: -103.86346	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks				Well Completion				
0	NM	L	D	N	N	NM	SP	NS	Pale pink to buff colored poorly graded sand with minor silt								
5																	
10																	
15																	
20	NM	L	D	N	N	NM	SW	NS	Pale tan orange well graded fine sand with minor medium and coarse sand								
25																	
30																	
35	NM	L	D	N	N	NM	SP	NS	Pale orange brown poorly graded fine sand with minor gravel								
40																	
45																	
50																	
55																	
60																	
65	NM	L	D	N	N	NM	SP	NS	Grey poorly graded fine sand with minor gravel								
70																	
75																	
80																	
85																	
90	NM	L	D	N	N	NM	SP	NS	Darker grey poorly graded fine sand with minor silt and minor medium sand								
95																	
100	NM	M	D	N	N	NM	SC	NS	Dark grey fine sand with moderate silt and clay - TD 106'7"								
106'7"																	

				BORING LOG/MONITORING WELL COMPLETION DIAGRAM									
Drilling Method: Air Rotary				Sampling Method: None				Boring/Well Number: MW-1				Location: Ross Draw Unit #57	
Gravel Pack Type: 10/20 Sand				Gravel Pack Depth Interval: 3 Bags				Date: 12/9/2020				Client: WPX Energy	
Casing Type: PVC				Diameter: 2-inch		Depth Interval: 0-105 feet bgs		Logged By: J. Linn, PG				Drilled By: Talon LPE	
Screen Type: PVC				Slot: 0.010-inch		Diameter: 2-inch		Depth Interval: 105-110 ft		Boring Total Depth (ft. BGS): 110		Latitude: 32.01032	
								Well Total Depth (ft. BGS): 110				Longitude: -103.87246	
												Depth to Water (ft. BTOC): > 110	
												DTW Date: 12/16/2020	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks			Well Completion	
0	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand				
5													
10													
15													
20													
25													
30													
35	NM	M	D	N	N	NM	SW	NS	Hard, dry pale pink orange well graded sand with gravel				
40													
45													
50	NM	M	D	N	N	NM	SM	NS	Pale orange red tan silty fine sand				
55													
60	NM	L	D	N	N	NM	SW	NS	Dark brown greyish well graded sand				
65													
70	NM	L/M	D to SL M	N	N	NM	SW	NS	Grey well graded sand				
75													
80													
85													
90													
95	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand - TD 110' bgs				
100													
105													

							BORING LOG/MONITORING WELL COMPLETION DIAGRAM														
Boring/Well Number:							Location:														
Date:							Client:														
Drilling Method:							Logged By:					Drilled By:									
Gravel Pack Type:							Seal Type:					Seal Depth Interval:					Latitude:				
Casing Type:							Boring Total Depth (ft. BGS):					Longitude:									
Screen Type:							Well Total Depth (ft. BGS):					Depth to Water (ft. BTOC):					DTW Date:				
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks					Well Completion							
0	NM	L	D	N	N	NM	CE	NS	Buff to pale pink caliche												
5																					
10																					
15																					
20	NM	L	D	N	N	NM	SM	NS	Tan to pale red silty sand												
25																					
30																					
35																					
40																					
45																					
50																					
55	NM	M	M	N	N	NM	ML	NS	Tan to pale red sandy silt with minor medium sand												
60																					
65	NM	H	M	N	N	NM	CL	NS	Tan clay with minor gravel												
70																					
75	NM	L	D	N	N	NM	SP	NS	Pale red poorly graded fine sand with minor silt												
80																					
85	NM	H	D/SLM	N	N	NM	CL	NS	Grey sandy lean clay with minor medium sand and minor angular gravel												
90																					
95	NM	M/H	M	N	N	NM	CL	NS	Brown with orange sandy lean clay with minor medium sand and angular gravel - TD Boring: 105'												
100																					

Attachment 02: Laboratory Analytical Results



Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Project Id: 07052020
Contact: Lynda Laumbach
Project Location:

Date Received in Lab: Thu 07.16.2020 16:20
Report Date: 07.22.2020 08:07
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667473-001	667473-002	667473-003	667473-004	667473-005	667473-006
	<i>Field Id:</i>	DS01	DS01A	DS02	DS02A	DS03	DS03A
	<i>Depth:</i>	2- ft	4- ft	2- ft	4- ft	2- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.16.2020 09:20	07.16.2020 09:25	07.16.2020 09:30	07.16.2020 09:35	07.16.2020 09:45	07.16.2020 09:50
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30
	<i>Analyzed:</i>	07.17.2020 20:49	07.17.2020 21:05	07.17.2020 21:11	07.17.2020 21:16	07.17.2020 21:22	07.17.2020 21:39
	<i>Units/RL:</i>	mg/kg RL					
Chloride		8340 200	723 100	4700 98.6	1430 99.8	26700 988	30900 1000

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer



Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Project Id: 07052020
Contact: Lynda Laumbach
Project Location:

Date Received in Lab: Thu 07.16.2020 16:20
Report Date: 07.22.2020 08:07
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667473-007	667473-008	667473-009	667473-010	667473-011	667473-012
	<i>Field Id:</i>	DS03B	DS03C	DS03D	DS04	DS04A	DS04B
	<i>Depth:</i>	6- ft	8- ft	10- ft	2- ft	4- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.16.2020 09:55	07.16.2020 10:00	07.16.2020 10:05	07.16.2020 10:10	07.16.2020 10:20	07.16.2020 10:25
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 16:30
	<i>Analyzed:</i>	07.17.2020 21:44	07.17.2020 21:50	07.17.2020 21:55	07.17.2020 22:01	07.17.2020 22:07	07.17.2020 22:23
	<i>Units/RL:</i>	mg/kg RL					
Chloride		32700 992	27200 998	28400 1000	26900 1010	23500 X 996	13800 1000

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer



Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Project Id: 07052020
Contact: Lynda Laumbach
Project Location:

Date Received in Lab: Thu 07.16.2020 16:20
Report Date: 07.22.2020 08:07
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667473-013		667473-014		667473-015		667473-016		667473-017		667473-018	
	<i>Field Id:</i>	DS04C		DS05		DS05A		DS05B		DS05C		DS06	
	<i>Depth:</i>	10- ft		2- ft		4- ft		6- ft		10- ft		2- ft	
	<i>Matrix:</i>	SOIL		SOIL									
	<i>Sampled:</i>	07.16.2020 10:30		07.16.2020 10:45		07.16.2020 10:50		07.16.2020 10:55		07.16.2020 11:00		07.16.2020 11:15	
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 16:30		07.17.2020 16:30		07.17.2020 16:30		07.17.2020 16:30		07.17.2020 16:30		07.17.2020 16:30	
	<i>Analyzed:</i>	07.17.2020 22:29		07.17.2020 22:46		07.17.2020 22:51		07.17.2020 22:57		07.17.2020 23:02		07.17.2020 23:08	
	<i>Units/RL:</i>	mg/kg	RL	mg/kg	RL								
Chloride	16000	1000	26000	988	24300	990	24800	994	24500	996	18800	998	

BRL - Below Reporting Limit

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Jessica Kramer



Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Project Id: 07052020
Contact: Lynda Laumbach
Project Location:

Date Received in Lab: Thu 07.16.2020 16:20
Report Date: 07.22.2020 08:07
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667473-019	667473-020	667473-021	667473-022	667473-023	667473-024
	<i>Field Id:</i>	DS06A	DS06B	DS06C	DS07	DS07A	DS07B
	<i>Depth:</i>	4- ft	6- ft	10- ft	2- ft	4- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.16.2020 11:20	07.16.2020 11:25	07.16.2020 11:30	07.16.2020 11:50	07.16.2020 11:55	07.16.2020 12:00
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 16:30	07.17.2020 16:30	07.17.2020 13:25	07.17.2020 13:25	07.17.2020 13:25	07.17.2020 13:25
	<i>Analyzed:</i>	07.17.2020 23:14	07.17.2020 23:19	07.17.2020 19:53	07.17.2020 19:58	07.17.2020 20:04	07.17.2020 20:10
	<i>Units/RL:</i>	mg/kg RL					
Chloride		34600 990	37900 998	28400 988	26300 992	22500 992	23100 998
TPH By SW8015 Mod	<i>Extracted:</i>				07.17.2020 14:30	07.17.2020 14:30	
	<i>Analyzed:</i>				07.17.2020 21:02	07.17.2020 21:22	
	<i>Units/RL:</i>				mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)					<49.8 49.8	<49.9 49.9	
Diesel Range Organics (DRO)					<49.8 49.8	<49.9 49.9	
Motor Oil Range Hydrocarbons (MRO)					<49.8 49.8	<49.9 49.9	
Total TPH					<49.8 49.8	<49.9 49.9	

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer



Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Project Id: 07052020
Contact: Lynda Laumbach
Project Location:

Date Received in Lab: Thu 07.16.2020 16:20
Report Date: 07.22.2020 08:07
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667473-025				
	Field Id:	DS07C				
	Depth:	10- ft				
	Matrix:	SOIL				
	Sampled:	07.16.2020 12:05				
Chloride by EPA 300	Extracted:	07.17.2020 13:25				
	Analyzed:	07.17.2020 20:15				
	Units/RL:	mg/kg RL				
Chloride		23800 1000				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer



Analytical Report 667473

for

WPX Energy Permian Basin, LLC

Project Manager: Lynda Laumbach

RDX 17 Federal Com #006H

07052020

07.22.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.22.2020

Project Manager: **Lynda Laumbach**
WPX Energy Permian Basin, LLC
5315 Buena Vista Dr.
Carlsbad, NM 88220

Reference: Eurofins Xenco, LLC Report No(s): **667473**
RDX 17 Federal Com #006H
Project Address:

Lynda Laumbach:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667473. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 667473 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
DS01	S	07.16.2020 09:20	2 ft	667473-001
DS01A	S	07.16.2020 09:25	4 ft	667473-002
DS02	S	07.16.2020 09:30	2 ft	667473-003
DS02A	S	07.16.2020 09:35	4 ft	667473-004
DS03	S	07.16.2020 09:45	2 ft	667473-005
DS03A	S	07.16.2020 09:50	4 ft	667473-006
DS03B	S	07.16.2020 09:55	6 ft	667473-007
DS03C	S	07.16.2020 10:00	8 ft	667473-008
DS03D	S	07.16.2020 10:05	10 ft	667473-009
DS04	S	07.16.2020 10:10	2 ft	667473-010
DS04A	S	07.16.2020 10:20	4 ft	667473-011
DS04B	S	07.16.2020 10:25	6 ft	667473-012
DS04C	S	07.16.2020 10:30	10 ft	667473-013
DS05	S	07.16.2020 10:45	2 ft	667473-014
DS05A	S	07.16.2020 10:50	4 ft	667473-015
DS05B	S	07.16.2020 10:55	6 ft	667473-016
DS05C	S	07.16.2020 11:00	10 ft	667473-017
DS06	S	07.16.2020 11:15	2 ft	667473-018
DS06A	S	07.16.2020 11:20	4 ft	667473-019
DS06B	S	07.16.2020 11:25	6 ft	667473-020
DS06C	S	07.16.2020 11:30	10 ft	667473-021
DS07	S	07.16.2020 11:50	2 ft	667473-022
DS07A	S	07.16.2020 11:55	4 ft	667473-023
DS07B	S	07.16.2020 12:00	6 ft	667473-024
DS07C	S	07.16.2020 12:05	10 ft	667473-025



CASE NARRATIVE

Client Name: WPX Energy Permian Basin, LLC

Project Name: RDX 17 Federal Com #006H

Project ID: 07052020
Work Order Number(s): 667473

Report Date: 07.22.2020
Date Received: 07.16.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3132059 Chloride by EPA 300

Lab Sample ID 667473-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 667473-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: **DS01**
Lab Sample Id: 667473-001

Matrix: Soil
Date Collected: 07.16.2020 09:20

Date Received: 07.16.2020 16:20
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 16:30

Basis: Wet Weight

Seq Number: 3132059

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8340	200	mg/kg	07.17.2020 20:49		20



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS01A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-002	Date Collected: 07.16.2020 09:25	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	723	100	mg/kg	07.17.2020 21:05		10



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS02	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-003	Date Collected: 07.16.2020 09:30	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4700	98.6	mg/kg	07.17.2020 21:11		10



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS02A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-004	Date Collected: 07.16.2020 09:35	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1430	99.8	mg/kg	07.17.2020 21:16		10



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS03	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-005	Date Collected: 07.16.2020 09:45	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26700	988	mg/kg	07.17.2020 21:22		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS03A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-006	Date Collected: 07.16.2020 09:50	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30900	1000	mg/kg	07.17.2020 21:39		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: **DS03B**
Lab Sample Id: 667473-007

Matrix: Soil
Date Collected: 07.16.2020 09:55

Date Received: 07.16.2020 16:20
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 16:30

Basis: Wet Weight

Seq Number: 3132059

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32700	992	mg/kg	07.17.2020 21:44		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS03C	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-008	Date Collected: 07.16.2020 10:00	Sample Depth: 8 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27200	998	mg/kg	07.17.2020 21:50		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS03D	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-009	Date Collected: 07.16.2020 10:05	Sample Depth: 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28400	1000	mg/kg	07.17.2020 21:55		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS04	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-010	Date Collected: 07.16.2020 10:10	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26900	1010	mg/kg	07.17.2020 22:01		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS04A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-011	Date Collected: 07.16.2020 10:20	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23500	996	mg/kg	07.17.2020 22:07	X	100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS04B	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-012	Date Collected: 07.16.2020 10:25	Sample Depth: 6 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13800	1000	mg/kg	07.17.2020 22:23		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS04C	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-013	Date Collected: 07.16.2020 10:30	Sample Depth: 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16000	1000	mg/kg	07.17.2020 22:29		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS05	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-014	Date Collected: 07.16.2020 10:45	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26000	988	mg/kg	07.17.2020 22:46		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS05A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-015	Date Collected: 07.16.2020 10:50	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24300	990	mg/kg	07.17.2020 22:51		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS05B	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-016	Date Collected: 07.16.2020 10:55	Sample Depth: 6 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24800	994	mg/kg	07.17.2020 22:57		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS05C	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-017	Date Collected: 07.16.2020 11:00	Sample Depth: 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24500	996	mg/kg	07.17.2020 23:02		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS06	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-018	Date Collected: 07.16.2020 11:15	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 16:30	Basis: Wet Weight
Seq Number: 3132059		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18800	998	mg/kg	07.17.2020 23:08		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: **DS06A**
Lab Sample Id: 667473-019

Matrix: Soil
Date Collected: 07.16.2020 11:20

Date Received: 07.16.2020 16:20
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 16:30

Basis: Wet Weight

Seq Number: 3132059

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34600	990	mg/kg	07.17.2020 23:14		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: **DS06B**
Lab Sample Id: 667473-020

Matrix: Soil
Date Collected: 07.16.2020 11:25

Date Received: 07.16.2020 16:20
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 16:30

Basis: Wet Weight

Seq Number: 3132059

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37900	998	mg/kg	07.17.2020 23:19		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS06C	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-021	Date Collected: 07.16.2020 11:30	Sample Depth: 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 13:25	Basis: Wet Weight
Seq Number: 3132057		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28400	988	mg/kg	07.17.2020 19:53		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS07	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-022	Date Collected: 07.16.2020 11:50	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 13:25	Basis: Wet Weight
Seq Number: 3132057		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26300	992	mg/kg	07.17.2020 19:58		100

Analytical Method: TPH By SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 07.17.2020 14:30	Basis: Wet Weight
Seq Number: 3132061		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.17.2020 21:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.17.2020 21:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.17.2020 21:02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.17.2020 21:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.17.2020 21:02	
o-Terphenyl	84-15-1	109	%	70-135	07.17.2020 21:02	



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM RDX 17 Federal Com #006H

Sample Id: DS07A	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-023	Date Collected: 07.16.2020 11:55	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 13:25	Basis: Wet Weight
Seq Number: 3132057		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22500	992	mg/kg	07.17.2020 20:04		100

Analytical Method: TPH By SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 07.17.2020 14:30	Basis: Wet Weight
Seq Number: 3132061		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.17.2020 21:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.17.2020 21:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.17.2020 21:22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.17.2020 21:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.17.2020 21:22	
o-Terphenyl	84-15-1	112	%	70-135	07.17.2020 21:22	



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS07B	Matrix: Soil	Date Received: 07.16.2020 16:20
Lab Sample Id: 667473-024	Date Collected: 07.16.2020 12:00	Sample Depth: 6 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 07.17.2020 13:25	Basis: Wet Weight
Seq Number: 3132057		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23100	998	mg/kg	07.17.2020 20:10		100



Certificate of Analytical Results 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: **DS07C**
Lab Sample Id: 667473-025

Matrix: Soil
Date Collected: 07.16.2020 12:05

Date Received: 07.16.2020 16:20
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 13:25

Basis: Wet Weight

Seq Number: 3132057

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23800	1000	mg/kg	07.17.2020 20:15		100



QC Summary 667473

WPX Energy Permian Basin, LLC RDX 17 Federal Com #006H

Analytical Method: Chloride by EPA 300

Seq Number: 3132057

MB Sample Id: 7707603-1-BLK

Matrix: Solid

LCS Sample Id: 7707603-1-BKS

Prep Method: E300P

Date Prep: 07.17.2020

LCSD Sample Id: 7707603-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	265	106	90-110	4	20	mg/kg	07.17.2020 17:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3132059

MB Sample Id: 7707604-1-BLK

Matrix: Solid

LCS Sample Id: 7707604-1-BKS

Prep Method: E300P

Date Prep: 07.17.2020

LCSD Sample Id: 7707604-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	255	102	266	106	90-110	4	20	mg/kg	07.17.2020 20:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3132057

Parent Sample Id: 667509-014

Matrix: Soil

MS Sample Id: 667509-014 S

Prep Method: E300P

Date Prep: 07.17.2020

MSD Sample Id: 667509-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	285	200	492	104	492	104	90-110	0	20	mg/kg	07.17.2020 18:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3132057

Parent Sample Id: 667509-024

Matrix: Soil

MS Sample Id: 667509-024 S

Prep Method: E300P

Date Prep: 07.17.2020

MSD Sample Id: 667509-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	360	200	553	97	554	97	90-110	0	20	mg/kg	07.17.2020 19:25	

Analytical Method: Chloride by EPA 300

Seq Number: 3132059

Parent Sample Id: 667473-001

Matrix: Soil

MS Sample Id: 667473-001 S

Prep Method: E300P

Date Prep: 07.17.2020

MSD Sample Id: 667473-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8340	201	8530	95	8530	94	90-110	0	20	mg/kg	07.17.2020 20:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3132059

Parent Sample Id: 667473-011

Matrix: Soil

MS Sample Id: 667473-011 S

Prep Method: E300P

Date Prep: 07.17.2020

MSD Sample Id: 667473-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23500	1990	21700	0	21700	0	90-110	0	20	mg/kg	07.17.2020 22:12	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 667473

WPX Energy Permian Basin, LLC RDX 17 Federal Com #006H

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132061

MB Sample Id: 7707606-1-BLK

Matrix: Solid

LCS Sample Id: 7707606-1-BKS

Prep Method: SW8015P

Date Prep: 07.17.2020

LCSD Sample Id: 7707606-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1040	104	1040	104	70-135	0	35	mg/kg	07.17.2020 14:31	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1180	118	70-135	16	35	mg/kg	07.17.2020 14:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		126		127		70-135	%	07.17.2020 14:31
o-Terphenyl	119		126		124		70-135	%	07.17.2020 14:31

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132061

Matrix: Solid

MB Sample Id: 7707606-1-BLK

Prep Method: SW8015P

Date Prep: 07.17.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.17.2020 14:10	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3132061

Parent Sample Id: 667509-014

Matrix: Soil

MS Sample Id: 667509-014 S

Prep Method: SW8015P

Date Prep: 07.17.2020

MSD Sample Id: 667509-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	1010	101	948	95	70-135	6	35	mg/kg	07.17.2020 15:34	
Diesel Range Organics (DRO)	<50.0	999	1110	111	1040	104	70-135	7	35	mg/kg	07.17.2020 15:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		121		70-135	%	07.17.2020 15:34
o-Terphenyl	106		100		70-135	%	07.17.2020 15:34

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 1667473

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Project Manager: Lynda Laumbach
Company Name: WPX Energy Permian, LLC.
Address: 5315 Buena Vista Dr
City, State ZIP: Carlsbad, NM 88220
Phone: (575) 725-1647
Email: Lynda.Laumbach@wpxenenergy.com

Work Order Comments
Program: UST/PST
State of Project:
Reporting Level: I, II, III, IV
Deliverables: EDD, ADAPT, Other

Project Name: RDX 17 Fibral Co #664
Project Number: 07052020
Project Location: Lynda Laumbach
Turn Around: Routine
Due Date: 07/24/2020
TAT starts the day received by the lab, if received by 4:30pm

ANALYSIS REQUEST
Parameters: Chlorides (EPA 300.00), BTEX (Method 8021), TPH (Method 8015)
Preservative Codes: DI Water, H2O, MeOH, Me, HNO3, HN, NaOH, Na

Table with columns: Sample Identification, Matrix, Date Sampled, Time Sampled, Depth, Grab/Comp, # of Cont, Parameters, Sample Comments. Includes handwritten entries for samples DS01 through DS04.

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Received by: (Signature) Date/Time



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

Work Order No: 1067193

Project Manager: Lynda Laumbach
 Company Name: WPX Energy Permian, LLC.
 Address: 5315 Buena Vista Dr
 City, State ZIP: Carlsbad, NM 88220
 Phone: (575) 725-1647
 Email: Lynda.Laumbach@wpxenenergy.com

Bill to: (if different)
 Company Name: WPX Energy Permian, LLC.
 Address: 5315 Buena Vista Dr
 City, State ZIP: Carlsbad, NM 88220

www.xenco.com Page 2 of 3

Work Order Comments
 Program: UST/PST PRP Lowfields RC \$pertund
 State of Project:
 Reporting Level: Level II Level III ST/UST RRP Level IV
 Deliverables: EDD ADAPT Other:

Project Name: RDX 17 Federal Cont #0064
 Project Number: 07052020
 Project Location: Lynda Laumbach
 Sampler's Name: Lynda Laumbach
 PO #:
 Turn Around: Routine Rush
 Due Date: 07/24/2020
 TAT starts the day received by the lab, if received by 4:30pm

SAMPLE RECEIPT
 Received Intact: Yes No
 Cooler Custody Seals: Yes No
 Sample Custody Seals: Yes No
 Total Containers:
 Corrected Temperature:
 Temperature Reading:
 Temperature Factor:
 Wet Ice: Yes No
 Thermometer ID:
 Parameters: Chlorides (EPA 300.00), BTEX (Method 8021), TPH (Method 8015)

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes	Sample Comments
D504A	S	07/16/2020	10:20	4'	6	1	X	None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NASO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	
D504B	S	07/16/2020	10:25	6'	1	1			
D504C	S	07/16/2020	10:30	10'	1	1			
D505	S	07/16/2020	10:45	2'	1	1			
D505A	S	07/16/2020	10:50	4'	1	1			
D505B	S	07/16/2020	10:55	6'	1	1			
D505C	S	07/16/2020	11:05	10'	1	1			
D506	S	07/16/2020	11:15	2'	1	1			
D506A	S	07/16/2020	11:20	4'	1	1			
D506B	S	07/16/2020	11:25	6'	1	1			

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature) _____ Date/Time: 07/16/2020 16:10
 Received by: (Signature) _____ Date/Time: _____

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: WPX Energy Permian Basin, LLC

Date/ Time Received: 07.16.2020 04.20.00 PM

Work Order #: 667473

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6*Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

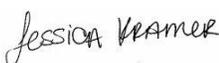
*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: 
Elizabeth McClellan

Date: 07.16.2020

Checklist reviewed by: 
Jessica Kramer

Date: 07.20.2020



Environment Testing
America

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ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-380-1
Client Project/Site: RDX Federal 17-6

For:
WPX Energy Production LLC
5315 Buena Vista Dr
Carlsbad, New Mexico 88220

Attn: Lynda Laumbach

Authorized for release by:
3/22/2021 2:22:11 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Laboratory Job ID: 890-380-1

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Definitions/Glossary

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Job ID: 890-380-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-380-1**

Receipt

The samples were received on 3/18/2021 8:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Client Sample ID: SS01

Lab Sample ID: 890-380-1

Date Collected: 03/16/21 13:40

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	379		5.04		mg/Kg			03/19/21 15:38	1

Client Sample ID: SS02

Lab Sample ID: 890-380-2

Date Collected: 03/16/21 13:45

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	440		4.96		mg/Kg			03/19/21 15:53	1

Client Sample ID: SS03

Lab Sample ID: 890-380-3

Date Collected: 03/16/21 13:50

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.8		4.98		mg/Kg			03/19/21 15:58	1

Client Sample ID: SS04

Lab Sample ID: 890-380-4

Date Collected: 03/16/21 13:55

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	888		5.02		mg/Kg			03/19/21 16:03	1

Client Sample ID: SS05

Lab Sample ID: 890-380-5

Date Collected: 03/16/21 14:00

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1060		5.04		mg/Kg			03/19/21 16:08	1

Client Sample ID: SS06

Lab Sample ID: 890-380-6

Date Collected: 03/16/21 14:05

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	273		5.05		mg/Kg			03/19/21 16:23	1

Client Sample ID: SS07

Lab Sample ID: 890-380-7

Date Collected: 03/16/21 14:10

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	518		5.05		mg/Kg			03/19/21 16:28	1

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Client Sample Results

Client: WPX Energy Production LLC
 Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Client Sample ID: SS08

Lab Sample ID: 890-380-8

Date Collected: 03/16/21 14:15

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	707		4.98		mg/Kg			03/19/21 16:33	1

Client Sample ID: SS09

Lab Sample ID: 890-380-9

Date Collected: 03/16/21 14:20

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	125		4.95		mg/Kg			03/19/21 16:38	1

Client Sample ID: SS10

Lab Sample ID: 890-380-10

Date Collected: 03/16/21 14:25

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	347		5.04		mg/Kg			03/19/21 16:43	1

Client Sample ID: SS11

Lab Sample ID: 890-380-11

Date Collected: 03/16/21 14:30

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	368		25.1		mg/Kg			03/19/21 18:33	5

Client Sample ID: SS12

Lab Sample ID: 890-380-12

Date Collected: 03/16/21 14:35

Matrix: Solid

Date Received: 03/18/21 08:05

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1350		25.0		mg/Kg			03/19/21 18:39	5

QC Sample Results

Client: WPX Energy Production LLC
 Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-593/1-A
 Matrix: Solid
 Analysis Batch: 594

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/19/21 15:23	1

Lab Sample ID: LCS 880-593/2-A
 Matrix: Solid
 Analysis Batch: 594

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	263.4		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-593/3-A
 Matrix: Solid
 Analysis Batch: 594

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	265.4		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 890-380-1 MS
 Matrix: Solid
 Analysis Batch: 594

Client Sample ID: SS01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	379		252	640.4		mg/Kg		104	90 - 110

Lab Sample ID: 890-380-1 MSD
 Matrix: Solid
 Analysis Batch: 594

Client Sample ID: SS01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	379		252	642.6		mg/Kg		104	90 - 110	0	20

Lab Sample ID: MB 880-595/1-A
 Matrix: Solid
 Analysis Batch: 596

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/19/21 15:54	1

Lab Sample ID: LCS 880-595/2-A
 Matrix: Solid
 Analysis Batch: 596

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	249.7		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-595/3-A
 Matrix: Solid
 Analysis Batch: 596

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.1		mg/Kg		100	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

HPLC/IC

Leach Batch: 593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-380-1	SS01	Soluble	Solid	DI Leach	
890-380-2	SS02	Soluble	Solid	DI Leach	
890-380-3	SS03	Soluble	Solid	DI Leach	
890-380-4	SS04	Soluble	Solid	DI Leach	
890-380-5	SS05	Soluble	Solid	DI Leach	
890-380-6	SS06	Soluble	Solid	DI Leach	
890-380-7	SS07	Soluble	Solid	DI Leach	
890-380-8	SS08	Soluble	Solid	DI Leach	
890-380-9	SS09	Soluble	Solid	DI Leach	
890-380-10	SS10	Soluble	Solid	DI Leach	
MB 880-593/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-593/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-593/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-380-1 MS	SS01	Soluble	Solid	DI Leach	
890-380-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-380-1	SS01	Soluble	Solid	300.0	593
890-380-2	SS02	Soluble	Solid	300.0	593
890-380-3	SS03	Soluble	Solid	300.0	593
890-380-4	SS04	Soluble	Solid	300.0	593
890-380-5	SS05	Soluble	Solid	300.0	593
890-380-6	SS06	Soluble	Solid	300.0	593
890-380-7	SS07	Soluble	Solid	300.0	593
890-380-8	SS08	Soluble	Solid	300.0	593
890-380-9	SS09	Soluble	Solid	300.0	593
890-380-10	SS10	Soluble	Solid	300.0	593
MB 880-593/1-A	Method Blank	Soluble	Solid	300.0	593
LCS 880-593/2-A	Lab Control Sample	Soluble	Solid	300.0	593
LCSD 880-593/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	593
890-380-1 MS	SS01	Soluble	Solid	300.0	593
890-380-1 MSD	SS01	Soluble	Solid	300.0	593

Leach Batch: 595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-380-11	SS11	Soluble	Solid	DI Leach	
890-380-12	SS12	Soluble	Solid	DI Leach	
MB 880-595/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-595/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-595/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-380-11	SS11	Soluble	Solid	300.0	595
890-380-12	SS12	Soluble	Solid	300.0	595
MB 880-595/1-A	Method Blank	Soluble	Solid	300.0	595
LCS 880-595/2-A	Lab Control Sample	Soluble	Solid	300.0	595
LCSD 880-595/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	595

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Lab Chronicle

Client: WPX Energy Production LLC
 Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Client Sample ID: SS01

Lab Sample ID: 890-380-1

Date Collected: 03/16/21 13:40

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 15:38	CH	XM

Client Sample ID: SS02

Lab Sample ID: 890-380-2

Date Collected: 03/16/21 13:45

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 15:53	CH	XM

Client Sample ID: SS03

Lab Sample ID: 890-380-3

Date Collected: 03/16/21 13:50

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 15:58	CH	XM

Client Sample ID: SS04

Lab Sample ID: 890-380-4

Date Collected: 03/16/21 13:55

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:03	CH	XM

Client Sample ID: SS05

Lab Sample ID: 890-380-5

Date Collected: 03/16/21 14:00

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:08	CH	XM

Client Sample ID: SS06

Lab Sample ID: 890-380-6

Date Collected: 03/16/21 14:05

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:23	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Client Sample ID: SS07

Lab Sample ID: 890-380-7

Date Collected: 03/16/21 14:10

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:28	CH	XM

Client Sample ID: SS08

Lab Sample ID: 890-380-8

Date Collected: 03/16/21 14:15

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:33	CH	XM

Client Sample ID: SS09

Lab Sample ID: 890-380-9

Date Collected: 03/16/21 14:20

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:38	CH	XM

Client Sample ID: SS10

Lab Sample ID: 890-380-10

Date Collected: 03/16/21 14:25

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			593	03/19/21 10:29	CH	XM
Soluble	Analysis	300.0		1	594	03/19/21 16:43	CH	XM

Client Sample ID: SS11

Lab Sample ID: 890-380-11

Date Collected: 03/16/21 14:30

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			595	03/19/21 10:43	CH	XM
Soluble	Analysis	300.0		5	596	03/19/21 18:33	CH	XM

Client Sample ID: SS12

Lab Sample ID: 890-380-12

Date Collected: 03/16/21 14:35

Matrix: Solid

Date Received: 03/18/21 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			595	03/19/21 10:42	CH	XM
Soluble	Analysis	300.0		5	596	03/19/21 18:39	CH	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

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Method Summary

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: WPX Energy Production LLC
Project/Site: RDX Federal 17-6

Job ID: 890-380-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-380-1	SS01	Solid	03/16/21 13:40	03/18/21 08:05	
890-380-2	SS02	Solid	03/16/21 13:45	03/18/21 08:05	
890-380-3	SS03	Solid	03/16/21 13:50	03/18/21 08:05	
890-380-4	SS04	Solid	03/16/21 13:55	03/18/21 08:05	
890-380-5	SS05	Solid	03/16/21 14:00	03/18/21 08:05	
890-380-6	SS06	Solid	03/16/21 14:05	03/18/21 08:05	
890-380-7	SS07	Solid	03/16/21 14:10	03/18/21 08:05	
890-380-8	SS08	Solid	03/16/21 14:15	03/18/21 08:05	
890-380-9	SS09	Solid	03/16/21 14:20	03/18/21 08:05	
890-380-10	SS10	Solid	03/16/21 14:25	03/18/21 08:05	
890-380-11	SS11	Solid	03/16/21 14:30	03/18/21 08:05	
890-380-12	SS12	Solid	03/16/21 14:35	03/18/21 08:05	

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-9800

Work Order No:

www.xenco.com Page 2 of 2

Project Manager: Lynda Laumbach
Company Name: WPX Energy Permian, LLC.
Address: 5315 Buena Vista Dr
City, State ZIP: Carlsbad, NM 88220
Phone: (575) 725-1647
Email: Lynda.Laumbach@wpxenenergy.com

Program: UST/PST
State of Project:
Reporting Level: I, II, III, IV
Deliverables: EDD, ADAPT, Other

Project Name: RDX Federal 17-6
Project Number:
Project Location: Eddy County, NM
Sampler's Name:
PO #:
SAMPLE RECEIPT
Received Inact: Yes No
Cooler Custody Seals: Yes No N/A
Sample Custody Seals: Yes No N/A
Total Containers:
Parameters: Chlorides (EPA 300.00), BTEX (Method 8021), TPH (Method 8015), TPH (TX- Extended 1005)
Preservative Codes: None: NO, DI Water: H2O, Cool: Cool, MeOH: Me, HCL: HC, HNO3: HN, H2SO4: H2, NaOH: Na, H3PO4: HP, NaHSO4: NABIS, Na2S2O5: NASO5, Zn Acetate+NaOH: Zn, NaOH+Ascorbic Acid: SAPC

Table with columns: Sample Identification, Matrix, Date Sampled, Time Sampled, Depth, Grab/Comp, # of Cont, and various chemical analysis results.

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6040- 8RCRA 90 As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Received by: (Signature) Date/Time
1. [Signature] [Signature] 03/18/2021 8:55
2. [Signature] [Signature]
3. [Signature] [Signature]
4. [Signature] [Signature]
5. [Signature] [Signature]

Login Sample Receipt Checklist

Client: WPX Energy Production LLC

Job Number: 890-380-1

Login Number: 380

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WPX Energy Production LLC

Job Number: 890-380-1

Login Number: 380

List Number: 2

Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 03/19/21 12:51 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS
 Action 21762

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 21762
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
ceads	None	7/21/2021