



CLOSURE REQUEST REPORT

Prepared For:

WPX Energy Permian, LLC

5315 Buena Vista Dr.

Carlsbad, NM 88220

Site Information:

RDX Federal 17 #035H

Incident Number nAB1928154373

Unit D, Section 17, Township 26 South, Range 30 East

Eddy County, New Mexico

(32.048192°, -103.909715°)

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SYNOPSIS

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of WPX Energy Permian, LLC (WPX), presents the following Closure Request Report (CRR) detailing excavation and soil sampling activities to address an inadvertent release of produced water at the RDX Federal 17 #035H (Site) and to propose reclamation activities to reestablish vegetation within the remediated footprint. Based on laboratory analytical results from confirmation soil sampling activities at the Site, WPX is requesting No Further Action (NFA) for Incident Number nAB1928154373.

SITE LOCATION AND RELEASE BACKGROUND

The production well (API 30-015-43884) for this Site is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM), located (32.0492796, -103.909725) as provided on the initial Form C-141. The subject release is located south of the production well (32.048192°, -103.909715°), which is depicted on **Figure 1** in **Appendix A**.

On September 8, 2019, a check valve failure resulted in the release of approximately 10 barrels (bbls) of produced water onto a pipeline Right-of-Way (ROW) south of the well pad. A vacuum truck was dispatched to the Site and recovered approximately 4 bbls of fluids. The incident was reported to the New Mexico Conservation Division (NMOCD) on a Release Notification and Corrective Action Form (Form C-141) on September 16, 2019, and was subsequently assigned Incident Number nAB1928154373. The observed extent of the release was mapped with a handheld Global Positioning System (GPS) unit, hereafter referred to as the Area of Concern (AOC), which is depicted on **Figure 2** in **Appendix A**.

In September and November 2019, a third-party environmental consultant oversaw remediation activities to the Maximum Extent Practical (MEP) and prepared a Deferral Request Report (DDR), requesting that residual impacted soil be left in place surrounding active utility infrastructure. The DDR was denied on March 16, 2020, by the NMOCD due to the following:

- *"The OCD can only grant a deferral on an "Active Well Pad."*
- *"Soil sample points FS06 through FS09, SW01, SW02, and SW04 will need to be further delineated and safely excavated using a hydrovac and/or shovel. This will probably require coordinating with Solaris to remove the contaminated soil."*
- *"All off pad areas must contain a minimum of 4 feet non-waste containing uncontaminated, earthen material with chloride concentrations less than 600 mg/kg. In the pasture area, 4 feet below the ground surface, soil contamination limits revert back to Table 1 "Closure Criteria for Soils Impacted by a Release" Included in the spill rule <http://164.64.110.134/parts/title19/19.015.0029.html>."*
- *"Looking at the OCD Environmental Map and a few other resources, Below 4 feet in the pasture at this location, you would need to delineate and excavate to 20,000 mg/kg for chlorides."*
- *"Surface to 4 feet below ground surface the release will need to be delineated and excavated to 600 mg/kg for chlorides."*
-

Etech prepared a Closure Variance Request (CVR) to leave residual impacts in-situ surrounding active surface equipment/infrastructure and subsurface utilities containing a fragile subsurface pipeline within a shallow, well consolidated caliche and proposed corrective measures to improve vegetation regrowth. The CVR was submitted on August 2, 2023, and was denied on January 17, 2024, by the NMOCD due to the following:

- *"The Closure Variance Report is Denied. Please follow the conditions set forth in the review of the original Remediation Plan. Cleanup of off-pad impacts cannot be deferred as they would not meet the deferral requirements of 19.15.29.12(C)(2) NMAC. The difference between on and off-pad releases is when the reclamation and restoration must occur. Off-pad releases must be reclaimed and restored immediately. On-pad reclamation and restoration can wait until operations have ceased, but still must be done."*

Following the denial of the CVR, WPX coordinated the removal of surface infrastructure from the AOC area and coordinated with owner(s) of the subsurface infrastructure to determine soil removal requirements and/or encroachment guidelines as it pertained to each company. Continued remediation efforts are detailed in this updated CRR.

Previous remediation summaries may be referenced in the original reports submitted to the NMOCD.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

Based on the desktop review for the Site according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) considering depth to groundwater and the proximity to:

- Any continuously flowing watercourse or any other significant watercourse;
- Any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- An occupied permanent residence, school, hospital, institution or church;
- A spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes;
- Any freshwater well or spring;
- Incorporated municipal boundaries or a defined municipal fresh water well field covered under a municipal ordinance;
- A wetland;
- A subsurface mine;
- An unstable area (i.e. high karst potential); and
- A 100-year floodplain.

As summarized in the previous reports, depth to groundwater was determined to be greater than 100 feet below ground surface (bgs) and is further supported by a recently advanced based on a soil boring (MW-1) that was drilled by Talon LPE for WPX on December 16, 2020, located approximately 0.34 miles east of the Site on the RDX Federal Com 17-44H well pad. The soil boring location may be referenced on **Figure 1A** in **Appendix A**. Using a truck mounted drill rig equipped with hollow stem auger, the soil boring was advanced to a total depth of 110 feet bgs. No fluids were observed throughout the drilling process nor after a 72-hour observation period. Following the observation period, the boring was plugged and abandoned according to the appropriate regulations. The boring log for the referenced boring is provided in **Appendix B**.

All other potential receptors are not within the established buffers in NMAC 19.15.29.12. Receptor details from the site characterization are included in **Figure 1B** and **Figure 1C** in **Appendix A**.

Based on the results from the desktop review and estimated regional depth to groundwater at the Site, the following Closure Criteria was applied:

Constituents of Concern (COCs)	Laboratory Analytical Method	Closure Criteria [†]
Chloride	Environmental Protection Agency (EPA) 300.0	20,000 milligram per kilogram (mg/kg)
TPH (Total Petroleum Hydrocarbon)	EPA 8015 M/D	2,500 mg/kg
TPH-Gasoline Range Organics (GRO) + TPH-Diesel Range Organics (DRO)	EPA 8015 M/D	1,000 mg/kg
Benzene	EPA 8021B/8260B	10 mg/kg
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA 8021B/8260B	50 mg/kg

[†]The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

All potential receptors are not within the established buffers in NMAC 19.15.29.12. Receptor details and sources used to determine the site characterization are included in **Figure 1A**, **Figure 1B**, and **Figure 1C** in **Appendix A**. Referenced well records are provided as **Appendix B**.

DELINEATION SOIL SAMPLING ACTIVITIES

On July 3, 2024, Etech conducted delineation to reassess the lateral extent of residual impacts associated with the AOC. Eight delineation potholes, labeled from a continuation of previous delineation soil samples (PH10 through PH17) were advanced to 4 feet bgs within proximity to the original lateral delineation soil sampling locations presented in the DDR. Delineation was driven by field screening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Two soil samples were collected for laboratory analysis per delineation soil sampling location, representing the highest observed field screening concentration(s) and the terminus depth. Field screening results and soil descriptions are detailed on Soil Sampling Logs included in **Appendix C**. Photographic documentation of excavation activities is included in **Appendix D**.

The delineation soil samples were placed into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech, Inc. in Farmington, New Mexico, for analysis of the COCs. The delineation soil sample locations are shown in **Figure 2** in **Appendix A**.

DELINEATION LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all delineation soil samples indicated all analyzed COCs were below the Site Closure Criteria. Laboratory analytical results are summarized in **Table 1** included in **Appendix E**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix F**.

EXCAVATION SOIL SAMPLING ACTIVITIES

From October 14 to October 29, 2024, Etech directed the removal of identified residual soil impacts via hydro-excavation and mechanical heavy equipment based on laboratory analytical results from the DDR, recent delineation soil sample analytical results, and visual observation. The excavation was advanced to 4 feet bgs and laterally driven by field screening soil for VOCs and chloride as previously described. Photographic documentation of excavation activities is included in **Appendix D**.

Following the removal of impacted soil, Etech collected 5-point composite confirmation soil samples from the floors (FS01 through FS31) and sidewalls (SW01 through SW08) of the excavation, representing no more than 200 square feet per composite soil sample. The 5-point composite soil samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. The samples were handled and analyzed as previously described.

Approximately 980 cubic yards (CY) of additional impacted soil was removed from the Site, totaling approximately 1,255 CY removed from the Site when including completed remediation detailed in the DRR. Impacted soil was transported to the R360 Red Bluff Landfill Facility in Orla, Texas under WPX approved manifests. The excavation extent and locations of confirmation excavation soil samples are shown in **Figure 3** in **Appendix A**.

EXCAVATION LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all final confirmation excavation soil samples indicated all analyzed COCs were below the Site Closure Criteria. Laboratory analytical results are summarized in **Table 1** included in **Appendix E**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix F**.

RECLAMATION

Upon receipt of laboratory analytical results, the excavation, which measured approximately 6,116 square feet, was backfilled with 1,255 CY of clean, locally sourced soil and the Site was restored to “as close to its original state” as possible. The final soil cover was contoured to match the Site’s pre-existing grade to prevent ponding of water and erosion. BLM Seed Mix #2 (Sandy Sites) will be hand-broadcasted over the entire disturbed area in the next favorable growing season following BLM guidelines (**Appendix G**). The selected seed blend will provide the maximum results of vegetation regrowth and ground surface coverage to match pre-existing conditions at the Site.

On November 6, 2024, Etech assessed the backfill material for its capacity to host vegetative growth in comparison to the native surrounding soil. Three 5-point composite soil samples were collected from the backfill stockpile material for use the as soil cover for the excavation area (SC01 through SC03), representing approximately 418 CY per soil sample. One discrete soil sample was collected outside of the excavation disturbance area (BG01) from the surface (0-0.25 feet bgs) via hand shovel. The collected soil samples were field screened for VOCs and chloride, as previously described, and qualitatively evaluated for nutrient density of pH, Nitrogen (N), Phosphorus (P), and Potassium (K) utilizing a HoldAll® Soil Test Kit according to the operating manual, which is included in **Appendix H**.

Field screening results indicated the backfill material appears to correlate with surrounding soil nutrient content currently supporting native vegetative growth, as summarized in **Table 2** included in **Appendix E**. The restoration area and the location of field screened soil sample BG01 are shown in **Figure 4** in **Appendix A**. Photographic documentation of restoration activities is included in **Appendix D**.

CLOSURE REQUEST

Based on laboratory analytical results for confirmation excavation soil samples, WPX believes that residual soil impacts associated with the inadvertent release have been excavated and removed from the Site and the remediated area subsequently restored “as close to its original state” as possible. Concentrations of COCs for all final confirmation excavation soil samples were below the Site Closure Criteria and/or reclamation standard. WPX believes the completed remedial actions have met the requirements set forth in NMAC 19.15.29.13 regulations to be protective of human health, the environment and groundwater. As such, NFA appears warranted until the next favorable growing season and this CRR associated with Incident Number nRM2019548894 should be respectfully considered for Closure by the NMOCD.

If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (432) 305-6413 or joseph@etechenv.com or Anna Byers at (432) 305-6415 or anna@etechenv.com. **Appendix I** provides correspondence and/or email notification receipts associated with the subject release. Previous remediation activities and soil sample analytical results for the subject release can be referenced in archived reports in **Appendix J**.

Sincerely,
Etech Environmental and Safety Solutions, Inc.



Anna Byers
Senior Geologist



Joseph S. Hernandez
Senior Managing Geologist

cc: Jim Raley, WPX
New Mexico Oil Conservation Division
Bureau of Land Management

Appendices:

- Appendix A:** Figure 1: Site Map
Figure 1A: Site Characterization Map – Groundwater
Figure 1B: Site Characterization Map – Surficial Receptors
Figure 1C: Site Characterization Map – Subsurface Receptors
Figure 2: Delineation Soil Sample Locations
Figure 3: Excavation Soil Sample Locations
Figure 4: Restoration Area
- Appendix B:** Referenced Well Records
- Appendix C:** Soil Sampling Logs
- Appendix D:** Photographic Log
- Appendix E:** Tables
- Appendix F:** Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix G:** BLM Seed Mixture 2 for Sandy Sites
- Appendix H:** HoldAll® Operating Manual
- Appendix I:** Correspondence & Notifications
- Appendix J:** Archived Reports

APPENDIX A

Figures

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Site Location Map



0 2,000 4,000 Feet

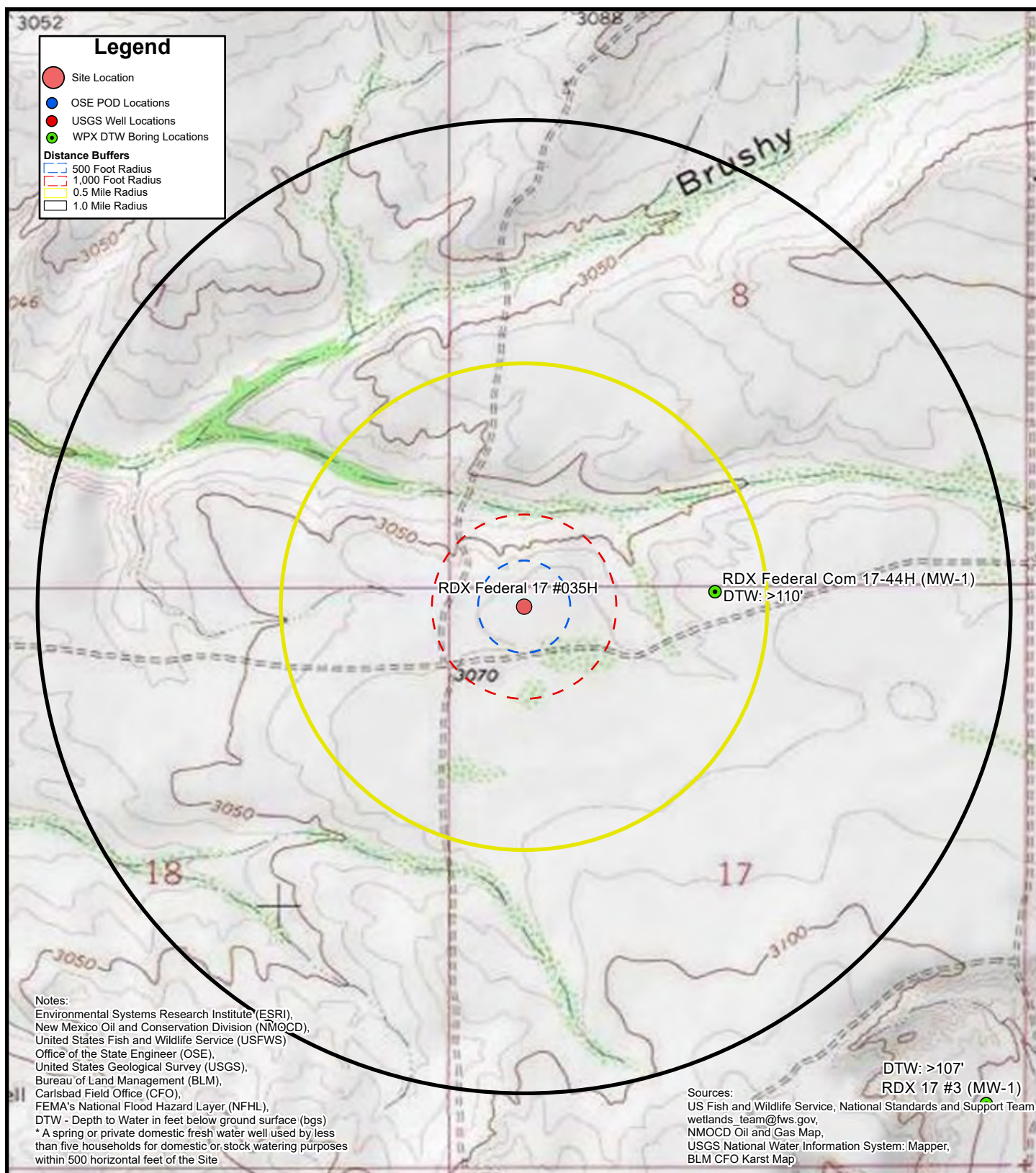
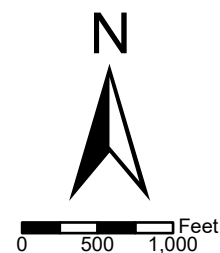


FIGURE 1A
Site Characterization Map
Ground Water

WPX ENERGY PERMIAN, LLC
RDX Federal 17 #035H
Unit D Sec 17 T26S R30E
Eddy County, New Mexico



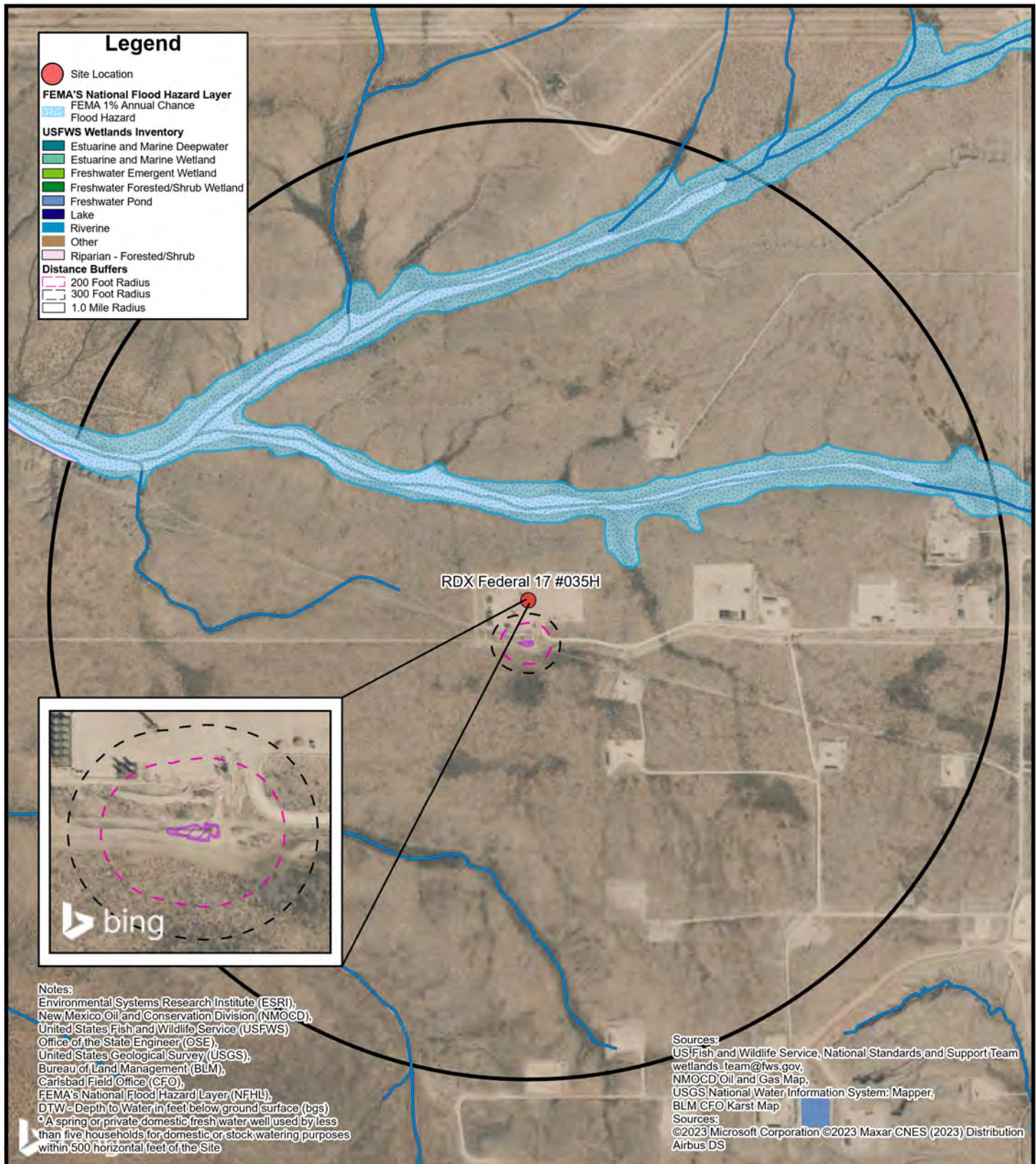
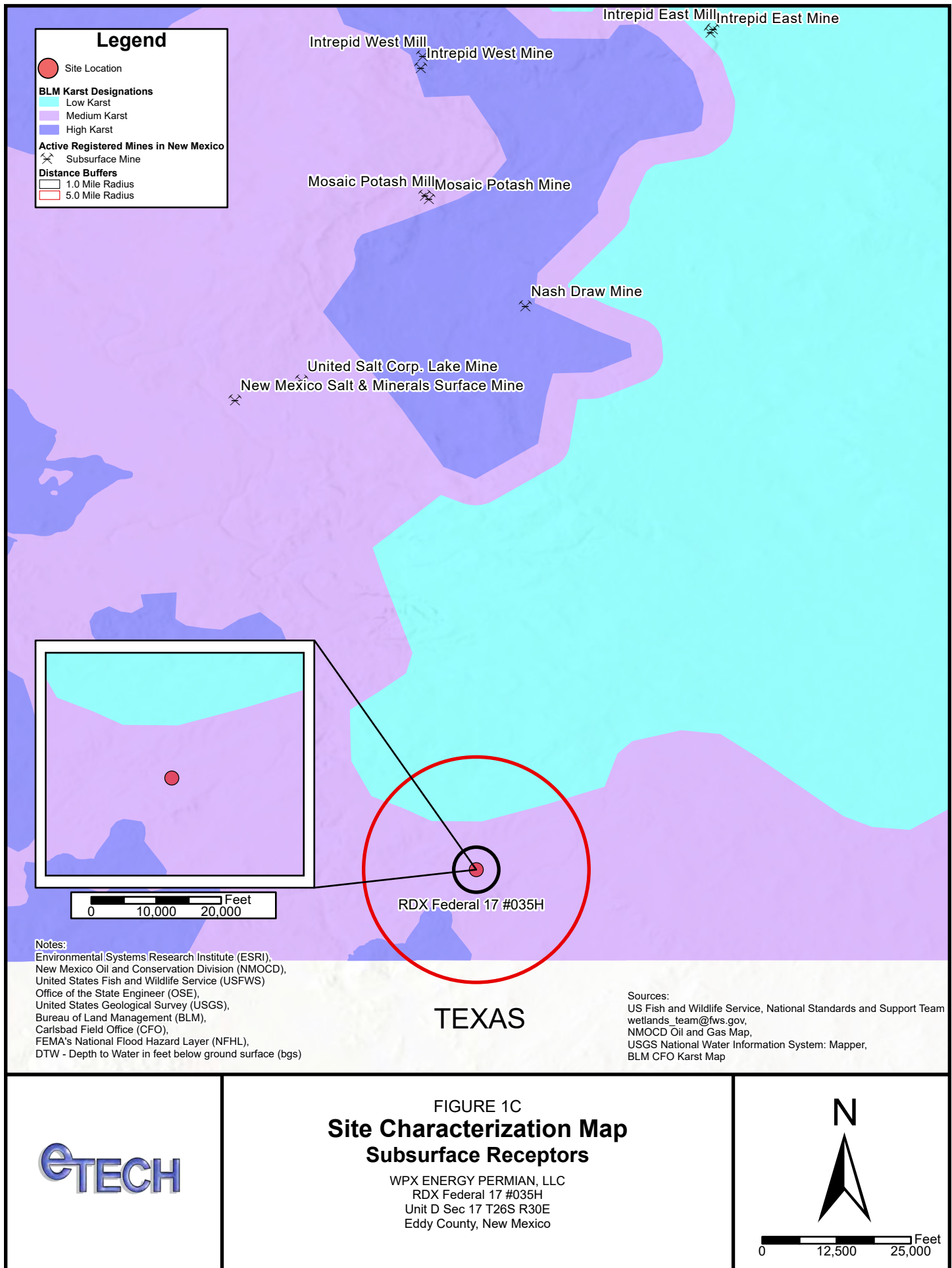


FIGURE 1B
**Site Characterization Map
 Surficial Receptors**

WPX ENERGY PERMIAN, LLC
 RDX Federal 17 #035H
 Unit D Sec 17 T26S R30E
 Eddy County, New Mexico

eTECH





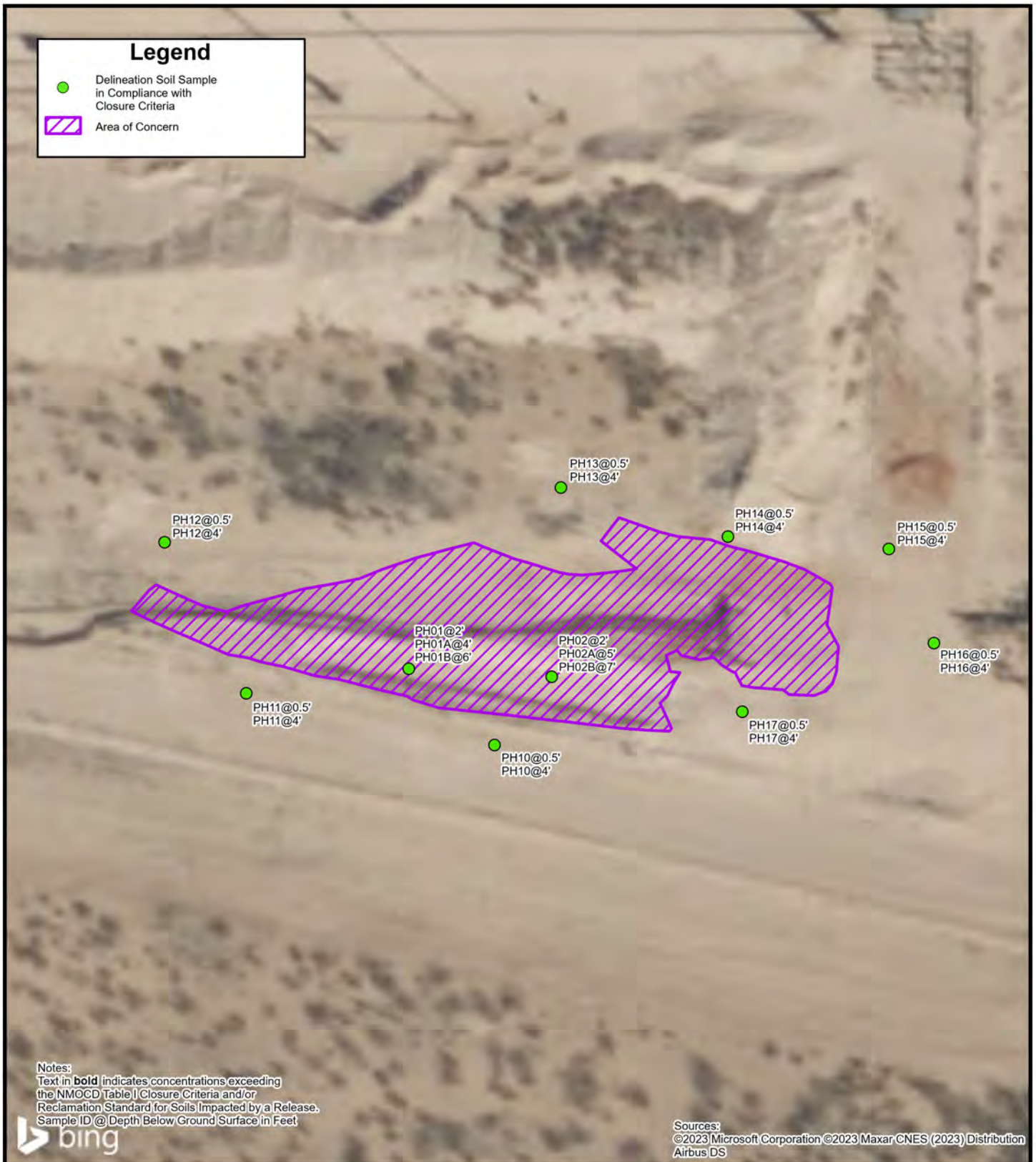


FIGURE 2

Delineation Soil Sample Locations

WPX ENERGY PERMIAN, LLC
RDX Federal 17 #035
Unit D Sec 17 T26S R30E
Eddy County, New Mexico

N



0 18.5 37 Feet



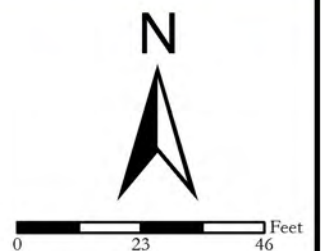


FIGURE 4

Future Restoration Area


WPX ENERGY PERMIAN, LLC
RDX Federal 17 #035
Unit D Sec 17 T26S R30E
Eddy County, New Mexico

eTECH



APPENDIX B

Referenced Well Records


 HRL COMPLIANCE SOLUTIONS							BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
							Boring/Well Number:		Location:				
							MW-1		RDX Federal Com 17-44H				
							Date:		Client:				
							12/8/2020		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. BTWC):		
PVC		0.010-inch		2-inch		105 - 110 ft		110			> 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	CE	NS	Buff to pale pink colored caliche				
5													
10													
15													
20													
25													
30													
35													
40	NM	L	D	N	N	NM	SW	NS	Pinky orange well graded sand with minor silt				
45													
50													
55													
60	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt				
65													
70													
75													
80	NM	L	D	N	N	NM	SW-SM SW-SC	NS	Pinky brown orange well-graded sand with silt and clay				
85													
90													
95													
100	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt - TD: 110' bgs				
105													


APPENDIX C

Soil Sampling Logs

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					Sample Name: PH10		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.048116, -103.909798					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	392	0	No	PH10	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	168	0	No		1	1		
Dry	144	0	No		2	2		
						3		
Dry	144	0	No	PH10	4	4		
Total Depth								

					Sample Name: PH11		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.048149, -103.909963					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH11	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	124	0	No		1	1		
Dry	124	0	No		2	2		
						3		
Dry	124	0	No	PH11	4	4		
Total Depth								



Sample Name: PH12

Date: 07/03/2024

Site Name: RDX Federal 17 #035H

Incident Number: NAB1928154373

Job Number: 18150

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EK

Method: Back Hoe

Site Coordinates: 32.048250, -103.910019

Hole Diameter: N/A

Total Depth: 4 feet

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH12	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor.
Dry	<124	0	No		1	1		@ 1' No organic, color change to tan.
Dry	<124	0	No		2	2		
						3		
Dry	<124	0	No	PH12	4	4		

Total Depth



Sample Name: PH13

Date: 07/03/2024

Site Name: RDX Federal 17 #035H

Incident Number: NAB1928154373

Job Number: 18150

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EK

Method: Back Hoe

Site Coordinates: 32.048286, -103.909754


Hole Diameter: N/A


Total Depth: 4 feet


Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.


Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH13	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor.
Dry	<124	0	No		1	1		@ 1' No organic, color change to tan.
Dry	<124	0	No		2	2		
						3		
Dry	<124	0	No	PH13	4	4		

Total Depth

					Sample Name: PH14		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.0482534, -103.9096430					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	220	0.1	No	PH14	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	<124	0.3	No		1	1		
Dry	<124	0	No		2	2		
						3		
Dry	<124	0.1	No	PH14	4	4		
Total Depth								

					Sample Name: PH15		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.048246, -103.909536					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH15	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	<124	0	No		1	1		
Dry	<124	0	No		2	2		
						3		
Dry	<124	0	No	PH15	4	4		
Total Depth								

					Sample Name: PH16		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.048183, -103.909506					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH16	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	<124	0	No		1	1		
Dry	<124	0	No		2	2		
						3		
Dry	<124	0	No	PH16	4	4		
Total Depth								

					Sample Name: PH17		Date: 07/03/2024	
					Site Name: RDX Federal 17 #035H			
					Incident Number: NAB1928154373			
					Job Number: 18150			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: EK		Method: Back Hoe	
Site Coordinates: 32.048138, -103.909635					Hole Diameter: N/A		Total Depth: 4 feet	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<124	0	No	PH17	0.5	0.5	CCHE	(0-4') Caliche, dry, tan-light brown, poorly graded with silt, very fine-coarse grain, trace organic, no stain, no odor. @ 1' No organic, color change to tan.
Dry	<124	0	No		1	1		
Dry	<124	0	No		2	2		
						3		
Dry	<124	0	No	PH17	4	4		
Total Depth								

APPENDIX D

Photographic Log

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**PHOTOGRAPHIC LOG**

WPX Energy Permian, LLC

RDX Federal 17 #035H

Incident Number nAB1928154373

**Photograph 1****Date: 07/03/2024**

Description: Western view of the AOC near the surface infrastructure.

**Photograph 2****Date: 07/03/2024**

Description: Northwestern view of pre-existing excavation advanced for Deferral Request.

**Photograph 3****Date: 07/03/2024**

Description: Western view of lateral delineation activities advanced south of the AOC.

**Photograph 4****Date: 07/03/2024**

Description: Northern view of lateral delineation activities advanced north of the AOC.

**PHOTOGRAPHIC LOG**

WPX Energy Permian, LLC

RDX Federal 17 #035H

Incident Number nAB1928154373

**Photograph 5****Date: 10/29/2024**

Description: Eastern view of excavation activities near subsurface infrastructure.

**Photograph 6****Date: 10/29/2024**

Description: Northwestern view of final excavation extent.

Position: +032.048284 / -103.907758 (±15.6ft)
 Altitude: 3076ft (±11.0ft)
 Datum: WGS-84
 Azimuth/Bearing: 213° S33W 3787mils True (±13°)
 Elevation Angle: -15.6°
 Horizon Angle: -01.3°
 Zoom: 0.5X
 RDX17-35

**Photograph 7****Date: 10/29/2024**

Description: Southwestern view of final excavation extent.

Position: +032.048234 / -103.910020 (±15.7ft)
 Altitude: 3076ft (±10.8ft)
 Datum: WGS-84
 Azimuth/Bearing: 092° S88E 1636mils True (±17°)
 Elevation Angle: -14.0°
 Horizon Angle: -04.5°
 Zoom: 0.5X
 RDX17-35

**Photograph 8****Date: 10/29/2024**

Description: Eastern view of final excavation extent.

**PHOTOGRAPHIC LOG**

WPX Energy Permian, LLC

RDX Federal 17 #035H

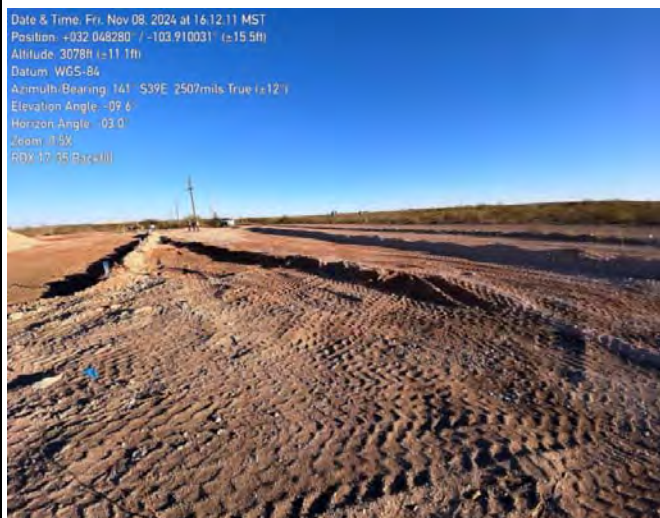
Incident Number nAB1928154373

**Photograph 9****Date: 11/06/2024**

Description: Nutrient testing results for backfill material sample SC01.

**Photograph 10****Date: 11/06/2024**

Description: Nutrient testing results for background soils (BG01).

**Photograph 11****Date: 11/08/2024**

Description: Southeastern view of the backfilled excavation.

**Photograph 12****Date: 11/08/2024**

Description: Eastern view of the backfilled excavation.

APPENDIX E

Tables



Table 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC
RDX Federal 17 #035H
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples - nAB1928154373										
PH10	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	168
PH10	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	167
PH11	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	58.9
PH11	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	158
PH12	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
PH12	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	20.4
PH13	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
PH13	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	78.9
PH14	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	205
PH14	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	74.2
PH15	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	99.3
PH15	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	65.3
PH16	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	92.3
PH16	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	64.8
PH17	07/03/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	97.7
PH17	07/03/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	63.5
Excavation Soil Samples - nAB1928154373										
FS01	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	562
FS02	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	530
FS03	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,090
FS04	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	910
FS05	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,230
FS06	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,230
FS07	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	926
FS08	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	869
FS09	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	882
FS10	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	902
FS11	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	883



Table 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC
RDX Federal 17 #035H
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS12	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,670
FS13	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,620
FS14	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,130
FS15	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,030
FS16	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	131
FS17	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
FS18	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
FS19	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
FS20	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
FS21	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,050
FS22	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,020
FS23	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	963
FS24	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
FS25	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	485
FS26	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	481
FS27	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	565
FS28	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	140
FS29	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	130
FS30	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	117
FS31	10/29/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	450
SW01	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
SW02	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
SW03	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	324
SW04	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	216



Table 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC
RDX Federal 17 #035H
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
SW05	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	270
SW06	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	204
SW07	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100
SW08	10/29/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<100

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard¹ for Soils Impacted by a Release

¹ The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.



Table 2
SOIL SAMPLE FIELD SCREENING RESULTS
WPX Energy Permian, LLC
RDX Federal 17 #035H
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Nitrogen	Potash	Phosphorous	PH (ppm)	Chloride (ppm)
Restoration Soil Samples							
SC01	11/06/2024	-	Very Low	High	Very Low	7.5	<116
SC02	11/06/2024	-	Very Low	Medium	Very Low	7.5	284
SC03	11/06/2024	-	Very Low	Medium	Very Low	7.5	188
BG01	11/06/2024	0-0.25	Very Low	Medium	Very Low	7.5	<116

Notes:

bgs: below ground surface

ppm: parts per million

"-" symbol: sample depth is not applicable

APPENDIX F

Laboratory Analytical Reports & Chain-of-Custody Documentation

Report to:
Anna Byers



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX Federal 17 #035H

Work Order: E407039

Job Number: 01058-0007

Received: 7/9/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/15/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 7/15/24



Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: RDX Federal 17 #035H
Workorder: E407039
Date Received: 7/9/2024 11:20:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/9/2024 11:20:00AM, under the Project Name: RDX Federal 17 #035H.

The analytical test results summarized in this report with the Project Name: RDX Federal 17 #035H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	5
Sample Data	6
PH10 0.5'	6
PH10 4'	7
PH11 0.5'	8
PH11 4'	9
PH12 0.5'	10
PH12 4'	11
PH13 0.5'	12
PH13 4'	13
PH14 0.5'	14
PH14 4'	15
PH15 0.5'	16
PH15 4'	17
PH16 0.5'	18
PH16 0.5'	19
PH17 0.5'	20
PH17 4'	21
QC Summary Data	22
QC - Volatile Organic Compounds by EPA 8260B	22
QC - Nonhalogenated Organics by EPA 8015D - GRO	23
QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	24

Table of Contents (continued)

QC - Anions by EPA 300.0/9056A	25
Definitions and Notes	26
Chain of Custody etc.	27

Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 07/15/24 12:19
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH10 0.5'	E407039-01A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH10 4'	E407039-02A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH11 0.5'	E407039-03A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH11 4'	E407039-04A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH12 0.5'	E407039-05A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH12 4'	E407039-06A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH13 0.5'	E407039-07A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH13 4'	E407039-08A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH14 0.5'	E407039-09A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH14 4'	E407039-10A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH15 0.5'	E407039-11A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH15 4'	E407039-12A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH16 0.5'	E407039-13A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH16 0.5'	E407039-14A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH17 0.5'	E407039-15A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.
PH17 4'	E407039-16A	Soil	07/03/24	07/09/24	Glass Jar, 2 oz.



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
7/15/2024 12:19:58PM

PH10 0.5'

E407039-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.0 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.4 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.0 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.4 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	95.6 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	168	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
7/15/2024 12:19:58PM

PH10 4'

E407039-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.1 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	94.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.3 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.1 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	94.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.3 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	86.2 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	167	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH11 0.5'

E407039-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	97.0 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	97.0 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	94.5 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	58.9	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
7/15/2024 12:19:58PM

PH11 4'

E407039-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.5 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.5 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	95.3 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	158	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH12 0.5'

E407039-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.2 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.2 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2428029	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	100 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: JM		Batch: 2428040	
Chloride	ND	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH12 4'

E407039-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.7 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.7 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	97.6 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	20.4	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH13 0.5'

E407039-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.3 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.4 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.3 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.4 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2428029	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	91.1 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: JM		Batch: 2428040	
Chloride	ND	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH13 4'
E407039-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	92.6 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	94.5 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.6 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	92.6 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	94.5 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.6 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2428029	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	97.6 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: JM		Batch: 2428040	
Chloride	78.9	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH14 0.5'

E407039-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.7 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.7 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	90.8 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	205	40.0	2	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH14 4'

E407039-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.6 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.5 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.6 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.5 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	86.3 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	74.2	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH15 0.5'
E407039-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.1 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.1 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	86.1 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	99.3	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH15 4'
E407039-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.0 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2428036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.0 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.8 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2428029	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	90.1 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: JM		Batch: 2428040	
Chloride	65.3	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH16 0.5'

E407039-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	97.7 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.9 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	97.7 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	92.4 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	92.3	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH16 0.5'

E407039-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.7 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	98.7 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	96.2 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	95.6 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	64.8	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH17 0.5'

E407039-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	94.2 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.9 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	69.4 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	97.7	20.0	1	07/09/24	07/09/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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PH17 4'

E407039-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Benzene	ND	0.0250	1	07/09/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/09/24	07/10/24	
Toluene	ND	0.0250	1	07/09/24	07/10/24	
o-Xylene	ND	0.0250	1	07/09/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/09/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.7 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2428036
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/09/24	07/10/24	
Surrogate: Bromofluorobenzene	93.7 %	70-130		07/09/24	07/10/24	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		07/09/24	07/10/24	
Surrogate: Toluene-d8	95.8 %	70-130		07/09/24	07/10/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2428029
Diesel Range Organics (C10-C28)	ND	25.0	1	07/09/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/09/24	07/11/24	
Surrogate: n-Nonane	89.6 %	50-200		07/09/24	07/11/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: JM		Batch: 2428040
Chloride	63.5	20.0	1	07/09/24	07/09/24	



QC Summary Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 7/15/2024 12:19:58PM
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Volatile Organic Compounds by EPA 8260B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2428036-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.470		0.500		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.502		0.500		100	70-130			
Surrogate: Toluene-d8	0.477		0.500		95.3	70-130			

LCS (2428036-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	2.38	0.0250	2.50		95.2	70-130			
Ethylbenzene	2.47	0.0250	2.50		98.6	70-130			
Toluene	2.30	0.0250	2.50		92.1	70-130			
o-Xylene	2.34	0.0250	2.50		93.7	70-130			
p,m-Xylene	4.63	0.0500	5.00		92.5	70-130			
Total Xylenes	6.97	0.0250	7.50		92.9	70-130			
Surrogate: Bromofluorobenzene	0.465		0.500		92.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.499		0.500		99.8	70-130			
Surrogate: Toluene-d8	0.481		0.500		96.2	70-130			

Matrix Spike (2428036-MS1)

Source: E407039-05

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	2.42	0.0250	2.50	ND	96.7	48-131			
Ethylbenzene	2.49	0.0250	2.50	ND	99.6	45-135			
Toluene	2.34	0.0250	2.50	ND	93.5	48-130			
o-Xylene	2.47	0.0250	2.50	ND	98.8	43-135			
p,m-Xylene	4.84	0.0500	5.00	ND	96.7	43-135			
Total Xylenes	7.31	0.0250	7.50	ND	97.4	43-135			
Surrogate: Bromofluorobenzene	0.471		0.500		94.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.8	70-130			
Surrogate: Toluene-d8	0.483		0.500		96.6	70-130			

Matrix Spike Dup (2428036-MSD1)

Source: E407039-05

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	2.41	0.0250	2.50	ND	96.3	48-131	0.373	23	
Ethylbenzene	2.52	0.0250	2.50	ND	101	45-135	1.12	27	
Toluene	2.36	0.0250	2.50	ND	94.3	48-130	0.874	24	
o-Xylene	2.54	0.0250	2.50	ND	102	43-135	3.01	27	
p,m-Xylene	4.99	0.0500	5.00	ND	99.9	43-135	3.19	27	
Total Xylenes	7.54	0.0250	7.50	ND	100	43-135	3.13	27	
Surrogate: Bromofluorobenzene	0.483		0.500		96.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.4	70-130			
Surrogate: Toluene-d8	0.482		0.500		96.4	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/15/2024 12:19:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2428036-BLK1) Prepared: 07/09/24 Analyzed: 07/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.470		0.500		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.502		0.500		100	70-130			
Surrogate: Toluene-d8	0.477		0.500		95.3	70-130			

LCS (2428036-BS2) Prepared: 07/09/24 Analyzed: 07/10/24

Gasoline Range Organics (C6-C10)	45.2	20.0	50.0		90.4	70-130			
Surrogate: Bromofluorobenzene	0.480		0.500		96.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.487		0.500		97.4	70-130			
Surrogate: Toluene-d8	0.489		0.500		97.8	70-130			

Matrix Spike (2428036-MS2) Source: E407039-05 Prepared: 07/09/24 Analyzed: 07/10/24

Gasoline Range Organics (C6-C10)	43.2	20.0	50.0	ND	86.5	70-130			
Surrogate: Bromofluorobenzene	0.473		0.500		94.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.478		0.500		95.6	70-130			
Surrogate: Toluene-d8	0.486		0.500		97.2	70-130			

Matrix Spike Dup (2428036-MSD2) Source: E407039-05 Prepared: 07/09/24 Analyzed: 07/10/24

Gasoline Range Organics (C6-C10)	43.9	20.0	50.0	ND	87.8	70-130	1.56	20	
Surrogate: Bromofluorobenzene	0.475		0.500		94.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.474		0.500		94.7	70-130			
Surrogate: Toluene-d8	0.484		0.500		96.7	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/15/2024 12:19:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2428029-BLK1)					Prepared: 07/09/24 Analyzed: 07/11/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	48.2		50.0		96.4	50-200			

LCS (2428029-BS1)					Prepared: 07/09/24 Analyzed: 07/11/24				
Diesel Range Organics (C10-C28)	265	25.0	250		106	38-132			
Surrogate: n-Nonane	53.8		50.0		108	50-200			

Matrix Spike (2428029-MS1)					Source: E407039-09		Prepared: 07/09/24 Analyzed: 07/11/24		
Diesel Range Organics (C10-C28)	264	25.0	250	ND	106	38-132			
Surrogate: n-Nonane	55.2		50.0		110	50-200			

Matrix Spike Dup (2428029-MSD1)					Source: E407039-09		Prepared: 07/09/24 Analyzed: 07/11/24		
Diesel Range Organics (C10-C28)	230	25.0	250	ND	92.0	38-132	13.9	20	
Surrogate: n-Nonane	44.8		50.0		89.7	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	7/15/2024 12:19:58PM

Anions by EPA 300.0/9056A

Analyst: JM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2428040-BLK1)					Prepared: 07/09/24 Analyzed: 07/09/24				
Chloride	ND	20.0							
LCS (2428040-BS1)					Prepared: 07/09/24 Analyzed: 07/09/24				
Chloride	248	20.0	250		99.3	90-110			
Matrix Spike (2428040-MS1)					Source: E407039-09		Prepared: 07/09/24 Analyzed: 07/09/24		
Chloride	425	40.0	250	205	88.1	80-120			
Matrix Spike Dup (2428040-MSD1)					Source: E407039-09		Prepared: 07/09/24 Analyzed: 07/09/24		
Chloride	439	40.0	250	205	93.7	80-120	3.22	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	07/15/24 12:19

- ND Analyte NOT DETECTED at or above the reporting limit
 - NR Not Reported
 - RPD Relative Percent Difference
 - DNI Did Not Ignite
 - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with ** are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Released to Imaging: 5/4/2025 2:08:17 PM

Received by OCD: 2/20/2025 1:24:13 PM

Client: WPX Energy Permian, LLC.	Bill To	Lab Use Only		TAT			EPA Program					
Project: RDX Fededral 17 #035H		Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Anna Byers		E 407039	01058-0007				5 day TAT					
Address: 13000 W County Rd 100		Address: 5315 Buena Vista Dr.										
City, State, Zip: Odessa, TX, 79765		City, State, Zip: Carlsbad, NM, 88220								RCRA		
Phone: 432-305-6415		Phone: 575-885-7502										
Email: Devon-team@etechnv.com		Email: jim.raley@dvn.com							State			
	WO: 21280176							NM	CO	UT	AZ	TX
	Incident ID: nAPP2401127879							Remarks				

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	
8:00	07.03.24	S	1	PH10	1	0.5'						X		
8:20	07.03.24	S	1	PH10	2	4'						X		
8:40	07.03.24	S	1	PH11	3	0.5'						X		
9:00	07.03.24	S	1	PH11	4	4'						X		
9:20	07.03.24	S	1	PH12	5	0.5'						X		
9:40	07.03.24	S	1	PH12	6	4'						X		
10:00	07.03.24	S	1	PH13	7	0.5'						X		
10:20	07.03.24	S	1	PH13	8	4'						X		
10:40	07.03.24	S	1	PH14	9	0.5'						X		
11:00	07.03.24	S	1	PH14	10	4'						X		

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Relinquished by: (Signature) [Signature] Date 07/08/24 Time 10:00

Relinquished by: (Signature) Michelle Gonzales Date 7-8-24 Time 1755

Relinquished by: (Signature) J.M. Date 7-8-24 Time 2400

Received by: (Signature) [Signature] Date 7-8-24 Time 1000

Received by: (Signature) [Signature] Date 7-8-24 Time 1755

Received by: (Signature) [Signature] Date 7-9-24 Time 1120

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Lab Use Only

Received on ice: 0/ N

T1 _____ T2 _____ T3 _____

AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

Client: WPX Energy Permian, LLC.					Bill To		Lab Use Only				TAT				EPA Program				
Project: RDX Federal 17 #035H					Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Anna Byers					Address: 5315 Buena Vista Dr.		E 407039		01058-0007					5 day TAT					
Address: 13000 W County Rd 100					City, State, Zip: Carlsbad, NM, 88220		Analysis and Method										RCRA		
City, State, Zip: Odessa, TX, 79765					Phone: 575-885-7502												State		
Phone: 432-305-6415					Email: jim.raley@dmv.com												NM CO UT AZ TX		
Email: Devon-team@etechnv.com					WO: 21280176														
Collected by: Edyte Konan					Incident ID: nAPP2401127879														
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	TX DDOC	Remarks					
11:20	07.03.24	S	1	PH15	11	0.5'						X							
11:40	07.03.24	S	1	PH15	12	4'						X							
12:00	07.03.24	S	1	PH16	13	0.5'						X							
12:20	07.03.24	S	1	PH16	14	4'						X							
12:40	07.03.24	S	1	PH17	15	0.5'						X							
13:00	07.03.24	S	1	PH17	16	4'						X							
0710812024																			
Additional Instructions:																			
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: GM																			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only											
<i>[Signature]</i>		07/08/24	10:00	<i>[Signature]</i>		7-8-24	1000	Received on ice: <input checked="" type="checkbox"/> N											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3											
<i>Michelle Gonzalez</i>		7-8-24	1705	<i>J.M.</i>		7-8-24	1755												
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C											
<i>J.M.</i>		7-8-24	2400	<i>[Signature]</i>		7-9-24	1120	4											
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other																			
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA																			
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																			



Envirotech Analytical Laboratory

Printed: 7/9/2024 4:55:20PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	07/09/24 11:20	Work Order ID:	E407039
Phone:	(575) 200-6754	Date Logged In:	07/08/24 16:43	Logged In By:	Alexa Michaels
Email:	anna@etechnv.vom	Due Date:	07/15/24 17:00 (4 day TAT)		

Chain of Custody (COC)

- | | |
|---|-----|
| 1. Does the sample ID match the COC? | Yes |
| 2. Does the number of samples per sampling site location match the COC | Yes |
| 3. Were samples dropped off by client or carrier? | Yes |
| 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? | Yes |
| 5. Were all samples received within holding time? | Yes |

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier:

Comments/ResolutionSample Turn Around Time (TAT)

- | | |
|---|-----|
| 6. Did the COC indicate standard TAT, or Expedited TAT? | Yes |
|---|-----|

Sample Cooler

- | | |
|--|-----|
| 7. Was a sample cooler received? | Yes |
| 8. If yes, was cooler received in good condition? | Yes |
| 9. Was the sample(s) received intact, i.e., not broken? | Yes |
| 10. Were custody/security seals present? | No |
| 11. If yes, were custody/security seals intact? | NA |
| 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C | Yes |

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

- | | |
|---|-----|
| 13. If no visible ice, record the temperature. Actual sample temperature: | 4°C |
|---|-----|

Sample Container

- | | |
|--|-----|
| 14. Are aqueous VOC samples present? | No |
| 15. Are VOC samples collected in VOA Vials? | NA |
| 16. Is the head space less than 6-8 mm (pea sized or less)? | NA |
| 17. Was a trip blank (TB) included for VOC analyses? | NA |
| 18. Are non-VOC samples collected in the correct containers? | Yes |
| 19. Is the appropriate volume/weight or number of sample containers collected? | Yes |

Field Label

- | | |
|---|-----|
| 20. Were field sample labels filled out with the minimum information: | |
| Sample ID? | Yes |
| Date/Time Collected? | Yes |
| Collectors name? | Yes |

Sample Preservation

- | | |
|---|----|
| 21. Does the COC or field labels indicate the samples were preserved? | No |
| 22. Are sample(s) correctly preserved? | NA |
| 24. Is lab filtration required and/or requested for dissolved metals? | No |

Multiphase Sample Matrix

- | | |
|--|----|
| 26. Does the sample have more than one phase, i.e., multiphase? | No |
| 27. If yes, does the COC specify which phase(s) is to be analyzed? | NA |

Subcontract Laboratory

- | | |
|---|------------------------|
| 28. Are samples required to get sent to a subcontract laboratory? | No |
| 29. Was a subcontract laboratory specified by the client and if so who? | NA Subcontract Lab: NA |

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Anna Byers



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX Federal 17 #035H

Work Order: E410369

Job Number: 01058-0007

Received: 10/31/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
11/1/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 11/1/24



Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: RDX Federal 17 #035H
Workorder: E410369
Date Received: 10/31/2024 6:30:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/31/2024 6:30:00AM, under the Project Name: RDX Federal 17 #035H.

The analytical test results summarized in this report with the Project Name: RDX Federal 17 #035H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
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Cell: 775-287-1762
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Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	5
Sample Data	6
FS01 4'	6
FS02 4'	7
FS03 4'	8
FS04 4'	9
FS05 4'	10
FS06 4'	11
FS07 4'	12
FS08 4'	13
FS09 4'	14
FS10 4'	15
FS11 4'	16
FS12 4'	17
FS13 4'	18
FS14 4'	19
FS15 4'	20
FS16 4'	21
FS17 4'	22
FS18 4'	23
FS19 4'	24
FS20 4'	25

Table of Contents (continued)

QC Summary Data	26
QC - Volatile Organic Compounds by EPA8260B	26
QC - Nonhalogenated Organics by EPA 8015D - GRO	27
QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	28
QC - Anions by EPA 300.0/9056A	29
Definitions and Notes	30
Chain of Custody etc.	31

Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/01/24 13:03
--	---	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 4'	E410369-01A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS02 4'	E410369-02A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS03 4'	E410369-03A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS04 4'	E410369-04A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS05 4'	E410369-05A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS06 4'	E410369-06A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS07 4'	E410369-07A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS08 4'	E410369-08A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS09 4'	E410369-09A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS10 4'	E410369-10A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS11 4'	E410369-11A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS12 4'	E410369-12A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS13 4'	E410369-13A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS14 4'	E410369-14A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS15 4'	E410369-15A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS16 4'	E410369-16A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS17 4'	E410369-17A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS18 4'	E410369-18A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS19 4'	E410369-19A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS20 4'	E410369-20A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS01 4'

E410369-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
<i>Surrogate: Bromofluorobenzene</i>		116 %	70-130	10/30/24	10/31/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.0 %	70-130	10/30/24	10/31/24	
<i>Surrogate: Toluene-d8</i>		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
<i>Surrogate: Bromofluorobenzene</i>		116 %	70-130	10/30/24	10/31/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.0 %	70-130	10/30/24	10/31/24	
<i>Surrogate: Toluene-d8</i>		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444118	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
<i>Surrogate: n-Nonane</i>		95.5 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2444123	
Chloride	562	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS02 4'

E410369-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		89.2 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	530	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS03 4'

E410369-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		93.5 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	1090	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS04 4'

E410369-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.0 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		112 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.0 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		112 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		97.7 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	910	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS05 4'

E410369-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		90.7 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	1230	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS06 4'

E410369-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		86.0 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	1230	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS07 4'
E410369-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		96.2 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	926	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS08 4'

E410369-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		112 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		89.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		112 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		89.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	10/31/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	10/31/24	
Surrogate: n-Nonane		96.0 %	50-200	10/31/24	10/31/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	869	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS09 4'

E410369-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		90.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		90.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		96.0 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	882	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS10 4'

E410369-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		91.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		91.6 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		91.6 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	902	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS11 4'

E410369-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		92.4 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		114 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		92.4 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		90.5 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	883	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS12 4'

E410369-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		111 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		90.1 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	1670	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS13 4'

E410369-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.0 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.0 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		89.3 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	1620	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS14 4'

E410369-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		117 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		117 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		91.9 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	2130	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS15 4'
E410369-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444118	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		93.9 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2444123	
Chloride	2030	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS16 4'
E410369-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.4 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2444110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		93.4 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444118	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		85.9 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2444123	
Chloride	131	20.0	1	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS17 4'

E410369-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		95.8 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		92.3 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS18 4'
E410369-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		98.3 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 1:03:48PM

FS19 4'

E410369-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		115 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		109 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		89.4 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 1:03:48PM
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FS20 4'
E410369-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		97.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2444110
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		116 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		97.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		110 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444118
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		95.4 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2444123
Chloride	ND	100	5	10/31/24	10/31/24	



WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 1:03:48PM

Volatile Organic Compounds by EPA 8260B

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2444110-BLK1)

Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.579		0.500		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.461		0.500		92.1	70-130			
Surrogate: Toluene-d8	0.555		0.500		111	70-130			

LCS (2444110-BS1)

Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	2.60	0.0250	2.50		104	70-130			
Ethylbenzene	2.64	0.0250	2.50		106	70-130			
Toluene	2.65	0.0250	2.50		106	70-130			
o-Xylene	2.80	0.0250	2.50		112	70-130			
p,m-Xylene	5.62	0.0500	5.00		112	70-130			
Total Xylenes	8.42	0.0250	7.50		112	70-130			
Surrogate: Bromofluorobenzene	0.594		0.500		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.478		0.500		95.6	70-130			
Surrogate: Toluene-d8	0.548		0.500		110	70-130			

LCS Dup (2444110-BSD1)

Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	2.60	0.0250	2.50		104	70-130	0.0384	23	
Ethylbenzene	2.67	0.0250	2.50		107	70-130	1.13	27	
Toluene	2.68	0.0250	2.50		107	70-130	1.37	24	
o-Xylene	2.80	0.0250	2.50		112	70-130	0.0357	27	
p,m-Xylene	5.66	0.0500	5.00		113	70-130	0.692	27	
Total Xylenes	8.45	0.0250	7.50		113	70-130	0.451	27	
Surrogate: Bromofluorobenzene	0.594		0.500		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.471		0.500		94.1	70-130			
Surrogate: Toluene-d8	0.554		0.500		111	70-130			

QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 1:03:48PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2444110-BLK1) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.579		0.500		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.461		0.500		92.1	70-130			
Surrogate: Toluene-d8	0.555		0.500		111	70-130			

LCS (2444110-BS2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	47.5	20.0	50.0		95.0	70-130			
Surrogate: Bromofluorobenzene	0.596		0.500		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.462		0.500		92.4	70-130			
Surrogate: Toluene-d8	0.546		0.500		109	70-130			

LCS Dup (2444110-BSD2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.8	70-130	0.209	20	
Surrogate: Bromofluorobenzene	0.595		0.500		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.471		0.500		94.1	70-130			
Surrogate: Toluene-d8	0.562		0.500		112	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 1:03:48PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444118-BLK1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	46.1		50.0		92.2	50-200			

LCS (2444118-BS1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Diesel Range Organics (C10-C28)	277	25.0	250		111	38-132			
Surrogate: n-Nonane	52.1		50.0		104	50-200			

LCS Dup (2444118-BSD1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Diesel Range Organics (C10-C28)	279	25.0	250		112	38-132	0.578	20	
Surrogate: n-Nonane	50.9		50.0		102	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 1:03:48PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444123-BLK1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	ND	20.0							
LCS (2444123-BS1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	250	20.0	250		99.9	90-110			
LCS Dup (2444123-BSD1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	251	20.0	250		101	90-110	0.632	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/01/24 13:03

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: WPX Energy Permian, LLC.				Bill To		Lab Use Only				TAT				EPA Program				
Project: RDX Fededral 17 #035H				Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Anna Byers				Address: 5315 Buena Vista Dr.		E410369		01058-0007					48H TAT					
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method									RCRA			
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State				
Phone: 432-305-6417				Email: jim.raley@dv.com										NM	CO	UT	AZ	TX
Email: Devon-team@etechnv.com				WO: 21181900														
				Incident ID: nAB1928154373														
Collected by: Edyte Konan																		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number									Remarks				
10:00	10.29.24	S	1	FS01	1	4'							X					
10:10	10.29.24	S	1	FS02	2	4'							X					
10:20	10.29.24	S	1	FS03	3	4'							X					
10:30	10.29.24	S	1	FS04	4	4'							X					
10:40	10.29.24	S	1	FS05	5	4'							X					
10:50	10.29.24	S	1	FS06	6	4'							X					
11:00	10.29.24	S	1	FS07	7	4'							X					
11:10	10.29.24	S	1	FS08	8	4'							X					
11:20	10.29.24	S	1	FS09	9	4'							X					
11:30	10.29.24	S	1	FS10	10	4'							X					
Additional Instructions:																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.										Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.								
Relinquished by: (Signature) <i>[Signature]</i> Date: 10/29/24 Time: 8:00 pm										Received by: (Signature) <i>[Signature]</i> Date: 10-29-24 Time: 2000								
Relinquished by: (Signature) <i>Michelle Gonzales</i> Date: 10-30-24 Time: 1600										Received by: (Signature) <i>[Signature]</i> Date: 10-30-24 Time: 1630								
Relinquished by: (Signature) <i>[Signature]</i> Date: 10.30.24 Time: 2:315										Received by: (Signature) <i>Cathy Mon</i> Date: 10-31-24 Time: 16:30								
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other										Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																		



Client: WPX Energy Permian, LLC.				Bill To		Lab Use Only				TAT				EPA Program		
Project: RDX Fededral 17 #035H				Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA	
Project Manager: Anna Byers				Address: 5315 Buena Vista Dr.		E410369		01058-0007					48H TAT			
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method									RCRA	
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502											State	
Phone: 432-305-6417				Email: jim.raley@dv.com		NM		CO		UT		AZ		TX		
Email: Devon-team@etechnv.com				WO: 21181900		Depth (ft.)		TPH GRO/DRO/ORO by 8015		BTEX by 8021		VOC by 8260		Metals 6010		
				Incident ID: nAB1928154373				Chloride 300.0		BGDOC NM		GDOC		Remarks		
Collected by: Edyte Konan																
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC	Remarks		
11:40	10.29.24	S	1	FS11	11	4'						X				
11:50	10.29.24	S	1	FS12	12	4'						X				
12:00	10.29.24	S	1	FS13	13	4'						X				
12:10	10.29.24	S	1	FS14	14	4'						X				
12:20	10.29.24	S	1	FS15	15	4'						X				
12:30	10.29.24	S	1	FS16	16	4'						X				
12:40	10.29.24	S	1	FS17	17	4'						X				
12:50	10.29.24	S	1	FS18	18	4'						X				
13:00	10.29.24	S	1	FS19	19	4'						X				
13:10	10.29.24	S	1	FS20	20	4'						X				
Additional Instructions:																
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.										Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.						
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only								
<i>[Signature]</i>		10/29/24	8:00 PM	<i>Michelle Gonzales</i>		10.29.24	2000	Received on ice: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N								
<i>Michelle Gonzales</i>		10.30.24	1600	<i>[Signature]</i>		10.30.24	1630	T1 _____ T2 _____ T3 _____								
<i>[Signature]</i>		10.30.24	2315	<i>Cathy Man</i>		10.31.24	6:30	AVG Temp °C <u>4</u>								
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other										Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA						
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																



Envirotech Analytical Laboratory

Printed: 10/31/2024 9:32:50AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	10/31/24 06:30	Work Order ID:	E410369
Phone:	(575) 200-6754	Date Logged In:	10/30/24 12:37	Logged In By:	Caitlin Mars
Email:	anna@etechnv.com	Due Date:	11/01/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Project RDX Federal 17 #035H has been separated into 2 reports due to sample volume. WO are E410369 & E410370.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Anna Byers



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX Federal 17 #035H

Work Order: E410370

Job Number: 01058-0007

Received: 10/31/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
11/1/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 11/1/24



Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: RDX Federal 17 #035H
Workorder: E410370
Date Received: 10/31/2024 6:30:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/31/2024 6:30:00AM, under the Project Name: RDX Federal 17 #035H.

The analytical test results summarized in this report with the Project Name: RDX Federal 17 #035H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	4
Sample Data	5
FS21 4'	5
FS22 4'	6
FS23 4'	7
FS24 4'	8
FS25 4'	9
FS26 4'	10
FS27 4'	11
FS28 4'	12
FS29 4'	13
FS30 4'	14
FS31 4'	15
QC Summary Data	16
QC - Volatile Organic Compounds by EPA8260B	16
QC - Volatile Organics by EPA 8021B	17
QC - Nonhalogenated Organics by EPA 8015D - GRO	18
QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	20
QC - Anions by EPA 300.0/9056A	21
Definitions and Notes	22
Chain of Custody etc.	23

Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/01/24 15:55
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS21 4'	E410370-01A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS22 4'	E410370-02A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS23 4'	E410370-03A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS24 4'	E410370-04A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS25 4'	E410370-05A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS26 4'	E410370-06A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS27 4'	E410370-07A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS28 4'	E410370-08A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS29 4'	E410370-09A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS30 4'	E410370-10A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
FS31 4'	E410370-11A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS21 4'

E410370-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		97.0 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		97.0 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.2 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		96.5 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	1050	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS22 4'

E410370-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		100 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		100 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		103 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	1020	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS23 4'

E410370-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.7 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	102 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.7 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	102 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	96.6 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	963	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS24 4'

E410370-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2444143
Benzene	ND	0.0250	1	11/01/24	11/01/24	
Ethylbenzene	ND	0.0250	1	11/01/24	11/01/24	
Toluene	ND	0.0250	1	11/01/24	11/01/24	
o-Xylene	ND	0.0250	1	11/01/24	11/01/24	
p,m-Xylene	ND	0.0500	1	11/01/24	11/01/24	
Total Xylenes	ND	0.0250	1	11/01/24	11/01/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	88.9 %	70-130		11/01/24	11/01/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2444143
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/01/24	11/01/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	90.3 %	70-130		11/01/24	11/01/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
<i>Surrogate: n-Nonane</i>						
	107 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	ND	20.0	1	11/01/24	11/01/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS25 4'

E410370-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	97.2 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	93.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	97.2 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	93.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	99.8 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	485	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS26 4'

E410370-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.0 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	103 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.0 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	103 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	89.3 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	481	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:55:52PM
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FS27 4'

E410370-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	97.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	97.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	90.3 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	565	40.0	2	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:55:52PM
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FS28 4'
E410370-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		100 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene		100 %	70-130	10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4		94.9 %	70-130	10/30/24	10/31/24	
Surrogate: Toluene-d8		103 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane		91.7 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	140	20.0	1	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS29 4'

E410370-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.3 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	97.2 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.3 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	97.2 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	92.0 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	130	20.0	1	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS30 4'

E410370-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.3 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	91.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.3 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	91.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	95.9 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	117	20.0	1	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:55:52PM

FS31 4'

E410370-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.1 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	97.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	106 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.1 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	97.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	106 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	90.7 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	450	40.0	2	10/31/24	10/31/24	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444111-BLK1)

Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.495		0.500		98.9	70-130			

LCS (2444111-BS1)

Prepared: 10/30/24 Analyzed: 11/01/24

Benzene	2.40	0.0250	2.50		96.0	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.53	0.0250	2.50		101	70-130			
o-Xylene	2.68	0.0250	2.50		107	70-130			
p,m-Xylene	5.40	0.0500	5.00		108	70-130			
Total Xylenes	8.09	0.0250	7.50		108	70-130			
Surrogate: Bromofluorobenzene	0.498		0.500		99.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.5	70-130			
Surrogate: Toluene-d8	0.519		0.500		104	70-130			

LCS Dup (2444111-BSD1)

Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	2.08	0.0250	2.50		83.3	70-130	14.2	23	
Ethylbenzene	2.40	0.0250	2.50		96.0	70-130	7.17	27	
Toluene	2.26	0.0250	2.50		90.3	70-130	11.3	24	
o-Xylene	2.42	0.0250	2.50		97.0	70-130	10.1	27	
p,m-Xylene	4.89	0.0500	5.00		97.7	70-130	10.0	27	
Total Xylenes	7.31	0.0250	7.50		97.5	70-130	10.1	27	
Surrogate: Bromofluorobenzene	0.481		0.500		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.493		0.500		98.6	70-130			
Surrogate: Toluene-d8	0.500		0.500		99.9	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444143-BLK1) Prepared: 11/01/24 Analyzed: 11/01/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.05		8.00		88.1	70-130			

LCS (2444143-BS1) Prepared: 11/01/24 Analyzed: 11/01/24

Benzene	5.25	0.0250	5.00		105	70-130			
Ethylbenzene	5.13	0.0250	5.00		103	70-130			
Toluene	5.22	0.0250	5.00		104	70-130			
o-Xylene	5.12	0.0250	5.00		102	70-130			
p,m-Xylene	10.4	0.0500	10.0		104	70-130			
Total Xylenes	15.5	0.0250	15.0		104	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.12		8.00		89.0	70-130			

LCS Dup (2444143-BS1) Prepared: 11/01/24 Analyzed: 11/01/24

Benzene	5.26	0.0250	5.00		105	70-130	0.147	20	
Ethylbenzene	5.15	0.0250	5.00		103	70-130	0.410	20	
Toluene	5.24	0.0250	5.00		105	70-130	0.281	20	
o-Xylene	5.14	0.0250	5.00		103	70-130	0.298	20	
p,m-Xylene	10.5	0.0500	10.0		105	70-130	0.367	20	
Total Xylenes	15.6	0.0250	15.0		104	70-130	0.345	20	
Surrogate: 4-Bromochlorobenzene-PID	7.13		8.00		89.1	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444111-BLK1) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.495		0.500		98.9	70-130			

LCS (2444111-BS2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0		99.5	70-130			
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.479		0.500		95.8	70-130			
Surrogate: Toluene-d8	0.517		0.500		103	70-130			

LCS Dup (2444111-BSD2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.9	70-130	2.62	20	
Surrogate: Bromofluorobenzene	0.478		0.500		95.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444143-BLK1) Prepared: 11/01/24 Analyzed: 11/01/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.05		8.00		88.2	70-130			

LCS (2444143-BS2) Prepared: 11/01/24 Analyzed: 11/01/24

Gasoline Range Organics (C6-C10)	42.1	20.0	50.0		84.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.31		8.00		91.4	70-130			

LCS Dup (2444143-BSD2) Prepared: 11/01/24 Analyzed: 11/01/24

Gasoline Range Organics (C6-C10)	41.8	20.0	50.0		83.6	70-130	0.641	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.23		8.00		90.3	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444119-BLK1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	48.8		50.0		97.6	50-200			

LCS (2444119-BS1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	265	25.0	250		106	38-132			
Surrogate: n-Nonane	49.8		50.0		99.6	50-200			

LCS Dup (2444119-BSD1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	271	25.0	250		108	38-132	2.21	20	
Surrogate: n-Nonane	49.9		50.0		99.8	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:55:52PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444125-BLK1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	ND	20.0							
LCS (2444125-BS1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	254	20.0	250		102	90-110			
LCS Dup (2444125-BSD1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	254	20.0	250		102	90-110	0.0382	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/01/24 15:55

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



E410370 CM 10-31-24

Client: WPX Energy Permian, LLC. Project: RDX Fededral 17 #035H Project Manager: Anna Byers Address: 13000 W County Rd 100 City, State, Zip: Odessa, TX, 79765 Phone: 432-305-6417 Email: Devon-team@etechnv.com				Bill To		Lab Use Only				TAT				EPA Program	
				Attention: Jim Raley		Lab WO# E413		Job Number 01058-6007		1D	2D	3D	Standard	CWA	SDWA
				Address: 5315 Buena Vista Dr.									48H TAT		
				City, State, Zip: Carlsbad, NM, 88220											RCRA
				Phone: 575-885-7502											
				Email: jim.raley@dmv.com		Analysis and Method				State					
				WO: 21181900						NM CO UT AZ TX x					
				Incident ID: nAB1928154373											
Collected by: Edyte Konan						Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	TX GDOC	Remarks	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number										
13:20	10.29.24	S	1	FS21	1	4'						X			
13:40	10.29.24	S	1	FS22	2	4'						X			
14:00	10.29.24	S	1	FS23	3	4'						X			
14:20	10.29.24	S	1	FS24	4	4'						X			
14:40	10.29.24	S	1	FS25	5	4'						X			
15:00	10.29.24	S	1	FS26	6	4'						X			
15:20	10.29.24	S	1	FS27	7	4'						X			
15:40	10.29.24	S	1	FS28	8	4'						X			
16:00	10.29.24	S	1	FS29	9	4'						X			
16:20	10.29.24	S	1	FS30	10	4'						X			
Additional Instructions:															
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.										Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4							
Michelle Gonzales		10/29/24	08:00 PM	Michelle Gonzales		10/29/24	2000								
Michelle Gonzales		10/30/24	1600	Michelle Gonzales		10/30/24	1630								
Michelle Gonzales		10/30/24	1315	Cathy Ma		10/31/24	16:30								
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____										Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA					
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.															



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[illegible]

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Envirotech Analytical Laboratory

Printed: 10/31/2024 7:18:41AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	10/31/24 06:30	Work Order ID:	E410370
Phone:	(575) 200-6754	Date Logged In:	10/30/24 12:42	Logged In By:	Caitlin Mars
Email:	anna@etechnv.com	Due Date:	11/01/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Project RDX Federal 17 #035H has been separated into 2 reports due to sample volume. WO are E410369 & E410370.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Anna Byers



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX Federal 17 #035H

Work Order: E410371

Job Number: 01058-0007

Received: 10/31/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
11/1/24

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 11/1/24



Anna Byers
5315 Buena Vista Dr
Carlsbad, NM 88220

Project Name: RDX Federal 17 #035H
Workorder: E410371
Date Received: 10/31/2024 6:30:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/31/2024 6:30:00AM, under the Project Name: RDX Federal 17 #035H.

The analytical test results summarized in this report with the Project Name: RDX Federal 17 #035H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	4
Sample Data	5
SW01 0-4'	5
SW02 0-4'	6
SW03 0-4'	7
SW04 0-4'	8
SW05 0-4'	9
SW06 0-4'	10
SW07 0-4'	11
SW08 0-4'	12
QC Summary Data	13
QC - Volatile Organic Compounds by EPA8260B	13
QC - Nonhalogenated Organics by EPA 8015D - GRO	14
QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	15
QC - Anions by EPA 300.0/9056A	16
Definitions and Notes	17
Chain of Custody etc.	18

Sample Summary

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported: 11/01/24 15:36
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 0-4'	E410371-01A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW02 0-4'	E410371-02A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW03 0-4'	E410371-03A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW04 0-4'	E410371-04A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW05 0-4'	E410371-05A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW06 0-4'	E410371-06A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW07 0-4'	E410371-07A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.
SW08 0-4'	E410371-08A	Soil	10/29/24	10/31/24	Glass Jar, 2 oz.

Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:36:35PM

SW01 0-4'

E410371-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
<i>Surrogate: Bromofluorobenzene</i>		101 %	70-130	10/30/24	10/31/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.3 %	70-130	10/30/24	10/31/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
<i>Surrogate: Bromofluorobenzene</i>		101 %	70-130	10/30/24	10/31/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.3 %	70-130	10/30/24	10/31/24	
<i>Surrogate: Toluene-d8</i>		105 %	70-130	10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
<i>Surrogate: n-Nonane</i>		91.3 %	50-200	10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:36:35PM
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SW02 0-4'
E410371-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	99.4 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444119	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	96.7 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2444125	
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:36:35PM

SW03 0-4'

E410371-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.6 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.3 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	102 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.6 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.3 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	102 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	98.5 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	324	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:36:35PM

SW04 0-4'

E410371-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.8 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.8 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	107 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	216	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:36:35PM
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SW05 0-4'
E410371-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.5 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444119	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	99.4 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2444125	
Chloride	270	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:36:35PM
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SW06 0-4'
E410371-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.2 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	103 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	96.2 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.0 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	103 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444119	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	91.1 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2444125	
Chloride	204	200	10	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad
5315 Buena Vista Dr
Carlsbad NM, 88220

Project Name: RDX Federal 17 #035H
Project Number: 01058-0007
Project Manager: Anna Byers

Reported:
11/1/2024 3:36:35PM

SW07 0-4'

E410371-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.1 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2444111
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	99.1 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	105 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: NV		Batch: 2444119
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	99.1 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2444125
Chloride	ND	100	5	10/31/24	10/31/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX Federal 17 #035H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 11/1/2024 3:36:35PM
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SW08 0-4'
E410371-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Benzene	ND	0.0250	1	10/30/24	10/31/24	
Ethylbenzene	ND	0.0250	1	10/30/24	10/31/24	
Toluene	ND	0.0250	1	10/30/24	10/31/24	
o-Xylene	ND	0.0250	1	10/30/24	10/31/24	
p,m-Xylene	ND	0.0500	1	10/30/24	10/31/24	
Total Xylenes	ND	0.0250	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.9 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.5 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2444111	
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/30/24	10/31/24	
Surrogate: Bromofluorobenzene	98.9 %	70-130		10/30/24	10/31/24	
Surrogate: 1,2-Dichloroethane-d4	98.5 %	70-130		10/30/24	10/31/24	
Surrogate: Toluene-d8	104 %	70-130		10/30/24	10/31/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: NV		Batch: 2444119	
Diesel Range Organics (C10-C28)	ND	25.0	1	10/31/24	11/01/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/31/24	11/01/24	
Surrogate: n-Nonane	106 %	50-200		10/31/24	11/01/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: IY		Batch: 2444125	
Chloride	ND	100	5	10/31/24	10/31/24	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:36:35PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2444111-BLK1) Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.495		0.500		98.9	70-130			

LCS (2444111-BS1) Prepared: 10/30/24 Analyzed: 11/01/24

Benzene	2.40	0.0250	2.50		96.0	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.53	0.0250	2.50		101	70-130			
o-Xylene	2.68	0.0250	2.50		107	70-130			
p,m-Xylene	5.40	0.0500	5.00		108	70-130			
Total Xylenes	8.09	0.0250	7.50		108	70-130			
Surrogate: Bromofluorobenzene	0.498		0.500		99.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.5	70-130			
Surrogate: Toluene-d8	0.519		0.500		104	70-130			

LCS Dup (2444111-BSD1) Prepared: 10/30/24 Analyzed: 10/31/24

Benzene	2.08	0.0250	2.50		83.3	70-130	14.2	23	
Ethylbenzene	2.40	0.0250	2.50		96.0	70-130	7.17	27	
Toluene	2.26	0.0250	2.50		90.3	70-130	11.3	24	
o-Xylene	2.42	0.0250	2.50		97.0	70-130	10.1	27	
p,m-Xylene	4.89	0.0500	5.00		97.7	70-130	10.0	27	
Total Xylenes	7.31	0.0250	7.50		97.5	70-130	10.1	27	
Surrogate: Bromofluorobenzene	0.481		0.500		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.493		0.500		98.6	70-130			
Surrogate: Toluene-d8	0.500		0.500		99.9	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:36:35PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444111-BLK1) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.495		0.500		98.9	70-130			

LCS (2444111-BS2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0		99.5	70-130			
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.479		0.500		95.8	70-130			
Surrogate: Toluene-d8	0.517		0.500		103	70-130			

LCS Dup (2444111-BSD2) Prepared: 10/30/24 Analyzed: 10/31/24

Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.9	70-130	2.62	20	
Surrogate: Bromofluorobenzene	0.478		0.500		95.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:36:35PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444119-BLK1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	48.8		50.0		97.6	50-200			

LCS (2444119-BS1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	265	25.0	250		106	38-132			
Surrogate: n-Nonane	49.8		50.0		99.6	50-200			

LCS Dup (2444119-BSD1) Prepared: 10/31/24 Analyzed: 11/01/24

Diesel Range Organics (C10-C28)	271	25.0	250		108	38-132	2.21	20	
Surrogate: n-Nonane	49.9		50.0		99.8	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/1/2024 3:36:35PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2444125-BLK1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	ND	20.0							
LCS (2444125-BS1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	254	20.0	250		102	90-110			
LCS Dup (2444125-BSD1)					Prepared: 10/31/24 Analyzed: 10/31/24				
Chloride	254	20.0	250		102	90-110	0.0382	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX Federal 17 #035H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	11/01/24 15:36

- ND Analyte NOT DETECTED at or above the reporting limit
 - NR Not Reported
 - RPD Relative Percent Difference
 - DNI Did Not Ignite
 - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with ** are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: WPX Energy Permian, LLC.				Bill To		Lab Use Only				TAT				EPA Program				
Project: RDX Fededral 17 #035H				Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Anna Byers				Address: 5315 Buena Vista Dr.		E410371		01058-0007					48H TAT					
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method									RCRA			
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	TX GDOC	State				
Phone: 432-305-6417				Email: jim.raley@dv.com										NM	CO	UT	AZ	TX
Email: Devon-team@etechnv.com				WO: 21181900														
				Incident ID: nAB1928154373														
Collected by: Edyte Konan														Remarks				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number													
8:40	10.29.24	S	1	SW01	1	0-4'						X						
8:50	10.29.24	S	1	SW02	2	0-4'						X						
9:00	10.29.24	S	1	SW03	3	0-4'						X						
9:10	10.29.24	S	1	SW04	4	0-4'						X						
9:20	10.29.24	S	1	SW05	5	0-4'						X						
9:30	10.29.24	S	1	SW06	6	0-4'						X						
9:40	10.29.24	S	1	SW07	7	0-4'						X						
9:50	10.29.24	S	1	SW08	8	0-4'						X						
				10/29/2024														
Additional Instructions:																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.										Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.								
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only										
[Signature]		10/29/24	08:00 PM	Michelle Gonzalez		10/29/24	2:00	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3										
Michelle Gonzalez		10/30/24	1600	[Signature]		10/30/24	1630											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C										
[Signature]		10/30/24	1315	Caitlin Man		10/31/24	16:30	4										
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA												
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																		



envirotech

Envirotech Analytical Laboratory

Printed: 10/31/2024 7:21:33AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	WPX Energy - Carlsbad	Date Received:	10/31/24 06:30	Work Order ID:	E410371
Phone:	(575) 200-6754	Date Logged In:	10/30/24 12:54	Logged In By:	Caitlin Mars
Email:	anna@etechnv.com	Due Date:	11/01/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

APPENDIX G

BLM Seed Mixture 2 for Sandy Sites

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

APPENDIX H

HoldAll® Operating Manual

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



HoldAll®
Decorative Plant Accessories

40 TESTS
DIRECTIONS INSIDE

SOIL TEST KIT



Plants & Flowers



Grasses & Lawns



Fruits & Veggies



Trees & Shrubs

757860

HoldAll®
Decorative Plant Accessories**757860**

SOIL TEST KIT

Tests Your Soil for a Healthy Garden

• pH • Nitrogen(N) • Phosphorus(P) • Potassium(K) •

PREPARING YOUR SOIL SAMPLES

For lawns, annuals or house plants, take the soil sample from about 2-3" below the surface. For perennials especially shrubs, vegetables and fruit, the sample should be from 4" deep.

Avoid touching the soil with your hands. Test different areas of your soil, as it may differ according to past cultivation, underlying soil differences or a localized condition. It is preferable to make individual tests on several samples from different areas, than to mix the samples together.

Place your soil sample into a clean container. Break the sample up with the trowel or spoon and allow it to dry out naturally. This is not essential, however it makes working with the sample easier. Remove any small stones, organic material such as grass, weeds or roots and hard particles of lime. Then crumble the sample finely and mix it thoroughly.

HOW TO TEST YOUR SOIL:

Tube caps and capsules are color-coded for simplicity;

Green = pH **Purple** = Nitrogen
Blue = Phosphorus **Orange** = Potash

pH TEST:

1. Remove cap from the green capped tube.
 2. Fill tube with soil to the first line.
 3. Carefully open a green capsule and pour powder into the tube.
 4. Add water (preferably distilled) to the fourth line.
 5. Cap tube and shake thoroughly.
 6. Allow soil to settle and color to develop for about a minute.
 7. Compare color of solution to the pH color chart.
- Repeat for remaining capsules.



pH 7.5 - Alkaline

pH 7.0 - Neutral

pH 6.5 - Slight A

pH 6.0 - Acid

pH 5.5 - Acid

pH 5.0 - Very Acid

pH 4.5 - Very Acid

NITROGEN, PHOSPHORUS & POTASH TESTS:

Fill a clean jar or can with 1 part soil and 5 parts water. Thoroughly shake or stir the soil and water together for at least one minute and then allow the mixture to stand undisturbed until it settles (30 minutes to 24 hours, dependent on soil). A fine clay soil will take much longer to settle out than a coarse sandy soil. The clarity of the solution will also vary, the clearer the better, however cloudiness will not affect the accuracy of the test.

PLANT FOOD CHART		
Nitrogen	Phosphorous	Potash
High	High	High
Medium	Medium	Medium
Low	Low	Low
Very Low	Very Low	Very Low

1. Remove the cap from the tube. (Please note that the color of the capsules should match the color of the tube cap.) Using dropper provided, fill the tube to the fourth line with liquid from your soil mixture. Avoid disturbing the sediment

2. Carefully separate the two halves of one of the capsules. Pour the powder into the tube.

3. Cap the tube and shake thoroughly. Allow color to develop for 10 minutes.

4. Compare color of solution to the appropriate portion of the plant food color chart. For best results allow daylight, not direct sunlight, to illuminate the solution. Note your results. Repeat for remaining capsules.

TO RAISE OR LOWER pH OF YOUR SOIL

Raising and lowering pH is not an exact science & most plants have a reasonably wide tolerance, certainly to within 1 pH point. Consult the pH Preference List and you will see that the majority can manage well on a pH around 6.5 but some need an alkaline soil

and some a particularly acid soil. Altering pH takes time so do not expect rapid changes; rather, work steadily towards giving a plant its ideal conditions.

ADJUSTING pH

pH can be adjusted to provide more suitable growing conditions for the different plants you wish to grow. Or, you can leave the pH of the soil as it is and select plants that like the level revealed by your test. Once you have your pH reading, check the pH Preference List for the pH levels of over 450 popular plants, trees, shrubs, vegetables and fruits. If your pH reading differs significantly from the list's recommended levels, follow instructions below for adjusting soil pH. You can correct pH at any time of the year but it

is best to start in the Fall and check progress in the Spring. After working to adjust your soil, retest for pH level in 40-60 days. If results are still significantly off, retreat your soil, not exceeding recommended application levels. Allow one month to pass between adding lime and adding fertilizers.

SOIL TYPES

Sandy Soils: A light, coarse soil comprised of crumbling and alluvial debris.
Loam Soils: A medium friable soil, consisting of a blend of coarse (sand) alluvium and fine (clay) particles mixed within fairly broad limits with a little lime and humus.
Clay Soils: A heavy, clinging, impermeable

soil, comprised of very fine particles with little lime and humus and tending to be waterlogged in winter and very dry in summer.

ADJUSTING SOIL pH - HOW MUCH TO APPLY

Material	phChange	Sandy	Loamy	Clay
Dolomitic or Calcic Limestone	+0.5 unit (0.5 pH)	2.5	2.5	2.5
	+1.0 unit (1.0 pH)	5.0	5.0	5.0
Hydrated Lime	+0.5 unit (0.5 pH)	1.25 - 2.0	1.25 - 2.0	1.25 - 2.0
	+1.0 unit (1.0 pH)	3.5 - 4.0	3.5 - 4.0	3.5 - 4.0
Iron Sulfate	-0.5 unit (0.5 pH)	0.75	0.75	0.75
	-1.0 unit (1.0 pH)	1.5	1.5	1.5
Aluminum Sulfate	-0.5 unit (0.5 pH)	0.5 - 0.75	0.5 - 0.75	0.5 - 0.75
	-1.0 unit (1.0 pH)	1 - 1.25	1 - 1.25	1 - 1.25

Amounts listed are pounds per 100 square feet. Do not add more than 5lbs. of lime or sulfur in one application.

FERTILIZER RECOMMENDATIONS

FEEDING PRIOR TO PLANTING

Adequate reserves of plant food should be available in the soil before planting vegetables, preparing a seed or flower bed, sodding or seeding a lawn, or planting shrubs and trees. To make up any deficiencies, apply fertilizers from the following chart according to your soil test result.

TEST RESULTS	Very Low	Low	Medium	High
Nitrogen Fertilizers (%N)				
Dried Blood (11%)	36	19	6	N/A
Nitrate of Soda (16%)	27	14	3	N/A
Phosphate Fertilizers (%P)				
Bone Meal (19%)	27	14	6	N/A
Triple Superphosphate (46%)	10.25	5.25-5.5	2.25	N/A
Potash Fertilizers (%K)				
Muriate of Potash (60%)	8.75-9	4.75-5	2.25-2.5	N/A

Amounts listed are ounces per 100 square feet. (Ounces referred to are by weight)

FEEDING ESTABLISHED PLANTS AND BEDS

Based on your test results, apply the appropriate fertilizer(s) in the amounts recommended in the following chart.

RECOMMENDATIONS FOR N, P AND K RESULTS

	Very Low			Low			Medium		
	N	P	K	N	P	K	N	P	K
Lawn	22.0-22.5	0.75-1.0	4.75-5.0	14.0-14.5	1.0-1.5	2.25-2.5	3.75-4.0	0	0
Fruit	14.0-14.5	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Flower	14.0-14.25	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Shrubs (flowering)	14.0-14.25	8.25-8.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	1.0-1.25	4.75-5.0
Shrubs (foliage)	22.0-22.5	10.5-10.75	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
Veggies (root)	14.0-14.25	12.0-12.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	3.0	2.25-2.5
Veggies (leafy)	28.25-29.0	10.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	7.75-8.0	2.25	2.25-2.5
Tree	14.0-14.5	10.25	8.75-9.0	7.75-8.0	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
General Feed	22.0-22.5	8.25-8.5	8.75-9.0	10.5-11.0	4.0-4.25	4.75-5.0	3.75-4.0	1.0-1.25	2.25-2.5
	High								
	N	P	K						
Lawn	N/A	N/A	N/A	<p>The recommendations are based on the following fertilizers sources: Nitrate of Soda (16% N), Triple Superphosphate (46% P₂O₅) and Muriate of Potassium (60% K₂O). The amounts listed are in oz. /100 sq. ft. (Ounces referred to are by weight, not volume.) If you wish to use other fertilizer, simply check the package for the percentage of nutrients for N, P, & K and adjust the application level accordingly.</p>					
Fruit	N/A	N/A	N/A						
Flower	N/A	N/A	N/A						
Shrubs (flowering)	N/A	N/A	N/A						
Shrubs (foliage)	N/A	N/A	N/A						
Veggies (root)	N/A	N/A	N/A						
Veggies (leafy)	N/A	N/A	N/A						
Tree	N/A	N/A	N/A						
General Feed	N/A	N/A	N/A						

SPECIAL RECOMMENDATIONS FOR LAWNS

For a new lawn, pay special attention to soil preparation before planting. Proper soil preparation for any size lawn will have a significant impact on the amount of water and care it demands in the future. Till the soil to a depth of at least 12" and incorporate plenty of organic material (9" or more). Test your soil for pH and adjust to the levels recommended on pH Preference List for your type of grass. Refer to the Adjusting Soil pH chart for recommended lime or sulfate applications.

For established lawns, Nitrogen is the most essential nutrient to promote lush growth and deep, green color. Phosphorus and Potassium, in lesser quantities, are also important for strong root formation and growth. Compound fertilizers will supply all 3 nutrients, or you can select an individual fertilizer, such as Nitrate of Soda. The following chart gives recommended application levels specifically for lawns, based on your Nitrogen soil test results.

RECOMMENDATIONS FOR LAWNS

Fertilizer Type	Very Low	Low
24-4-4	4.0 lbs.	2.0 lbs.
24-3-4	3.1 lbs.	1.55 lbs.
30-4-4	3.0 lbs.	1.5 lbs.
	Medium	High
24-4-4	1.0 lbs.	N/A
24-3-4	.77 lbs.	N/A
30-4-4	.75 lbs.	N/A

Amounts listed are pounds per 1000 square feet.

SAFETY & HYGIENE

Dispose of test solutions by rinsing down the sink. Empty gelatin capsules should be disposed of immediately with household waste. Wash the test tubes and caps in warm, soapy water immediately after each use. Make sure any sediment or color staining is removed. Rinse well and dry. Each bag of capsules should be stored inside the blister. Fit the caps on each test tube. Place all components back into the package. The blister pack has been specially designed to be reused as a storage container.

Store your kit in clean, dry conditions, indoors. The powders are safe in normal domestic terms but like all chemicals and pharmaceuticals, they should be put away and kept out of reach of children. Try to avoid touching the powders. Always wash your hands thoroughly after making your tests. Do not eat, drink or smoke while using the soil test kit. Keep powders away from food, drink and animal feed. If taken internally, drink copious amounts of water and seek medical advice.

CAUTIONS

Where a lot of fertilizer is needed to correct one plant food, divide the applications over several weeks. Do not add lime and fertilizer together; lime first. Allow at least one month to pass before applying fertilizer. Retest 30 days after applying fertilizer.

HoldAll®

Decorative Plant Accessories

Plant pH Preference List

NAME	pH	NAME	pH	NAME	pH	NAME	pH	NAME	pH
FRUIT		VEGETABLES AND HERBS		HOUSE and GREENHOUSE PLANTS		FLOWERS, TREES AND SHRUBS		FLOWERS, TREES AND SHRUBS	
APPLE	5.0 - 6.5	SAGE	5.5 - 6.5	GENISTA	6.5 - 7.5	ASPERULA	6.0 - 8.0	LAUREL	6.5 - 7.5
APRICOT	6.0 - 7.0	SHALLOT	5.5 - 7.0	GERANIUM	6.0 - 8.0	ASPHODOLINE	6.0 - 8.0	LAVENDER	6.5 - 7.5
AVOCADO	6.0 - 7.5	SORGHUM	5.5 - 7.5	GLOXINIA	5.5 - 6.5	ASTER	5.5 - 7.5	LIATRIS	5.5 - 7.5
BANANA	5.0 - 7.0	SOYBEAN	5.5 - 6.5	GRAPE IVY	5.0 - 6.5	AUBRITA	6.0 - 7.5	LIGUSTRUM	5.0 - 7.5
BLACKBERRY	5.0 - 6.0	SPEARMINT	5.5 - 7.5	GRAPE HYACINTH	6.0 - 7.5	AZALEA	4.5 - 6.0	LILAC	6.0 - 7.5
BLUEBERRY	4.0 - 6.0	SPINACH	6.0 - 7.5	GREVILLEA	5.5 - 6.5	BALLOON FLOWER	6.0 - 6.5	LILY OF THE VALLEY	4.5 - 6.0
CANTALOUPE	6.5 - 7.5	SWEDE	5.0 - 7.0	GYNURA	5.5 - 6.5	BAYBERRY	4.0 - 6.0	LITHOSPERMUM	5.0 - 6.5
CHERRY	6.0 - 7.5	THYME	5.5 - 7.0	HEDERA (IVY)	6.0 - 8.0	BERGENIA	6.0 - 7.5	LOBELIA	6.5 - 7.5
CRANBERRY	5.5 - 6.5	TOMATO	5.5 - 7.5	HELIOTROPIUM	5.0 - 6.0	BLEEDING HEART	6.0 - 7.5	LUPINUS	5.5 - 7.0
CURRENT: Black	6.0 - 8.0	TURNIP	5.5 - 7.0	HENS AND CHICKENS	6.0 - 7.0	BLUEBELL	6.0 - 7.6	MAGNOLIA	5.0 - 6.0
Red	5.5 - 7.0	WATER CRESS	6.0 - 8.0	HERRINGBONE PLANT	6.0 - 6.0	BROOM	5.0 - 6.0	MAHONIA	6.0 - 7.0
White	6.0 - 8.0	HOUSE and GREENHOUSE PLANTS		HIBISCUS PLANT	6.0 - 8.0	BUDDLEIA	6.0 - 7.0	MARGOLD	5.5 - 7.0
DAMSON	6.0 - 7.5	ABUTILON	5.5 - 6.5	HOYA	5.0 - 6.5	BUPHTHALUM	6.0 - 8.0	MOLINIA	4.0 - 5.0
GOOSEBERRY	5.0 - 6.5	ACORUS	5.0 - 6.5	IMPATIENS	5.5 - 6.5	BUTTERFLY BUSH	4.0 - 6.0	MORAEA	5.5 - 6.5
GRAPEVINE	6.0 - 7.0	AECHMEA	5.0 - 5.5	IVY TREE	6.0 - 7.0	CALENDULA	5.5 - 7.0	MORNING GLORY	6.0 - 7.5
GRAPEFRUIT	6.0 - 7.5	AFRICAN VIOLET	6.0 - 7.0	JACARANDA	6.0 - 7.5	CAMASSIA	6.0 - 8.0	MOSS	6.0 - 8.0
HAZELNUT	6.0 - 7.0	AGLAONEMA	5.0 - 6.0	JAPANESE SEDGE	6.0 - 8.0	CANDYTUFT	6.0 - 7.5	MOSS, SPHAGNUM	3.5 - 5.0
HOP	6.0 - 7.5	AMARYLIS	5.5 - 6.5	JASMINUM	5.5 - 7.0	CANNA	6.0 - 8.0	MYOSOTIS	6.0 - 7.0
HUCKLEBERRY	4.0 - 6.0	ANTHURIUM	5.0 - 6.0	JERUSALEM CHERRY	5.5 - 6.5	CANTERBURY BELLS	7.0 - 7.5	NARCISSUS	6.0 - 8.5
LEMON	6.0 - 7.0	APHELANDRA	5.0 - 6.0	JESSAMONE	5.0 - 6.0	CARDINAL FLOWER	4.0 - 6.0	NASTURTIUM	5.5 - 7.5
LYCHEE	6.0 - 7.0	ARAUCHARIA	5.0 - 6.0	KALANCHOE	6.0 - 7.5	CARNATION	6.0 - 7.5	NICOTIANA	5.5 - 6.5
MANGO	5.0 - 6.0	ASPARAGUS FERN	6.0 - 8.0	KANGAROO THORN	6.0 - 8.0	CATALPA	6.0 - 8.0	PACHYSANDRA	5.0 - 8.0
MELON	5.5 - 6.5	ASPIDISTRA	4.0 - 5.5	KANGAROO VINE	5.0 - 6.5	CELOSIA	6.0 - 7.0	PAEONIA	6.0 - 7.5
MULBERRY	6.0 - 7.5	AZALEA	4.5 - 6.0	LANTANA	5.5 - 7.0	CENTAUREA	5.0 - 6.5	PANSY	5.5 - 7.0
NECTARINE	6.0 - 7.5	BABY'S BREATH	6.0 - 7.5	LAURUS (BAY TREE)	5.0 - 6.0	CERASTIUM	6.0 - 7.0	PASSION FLOWER	6.0 - 8.0
PEACH	6.0 - 7.5	BABY'S TEARS	5.0 - 6.0	LEMON PLANT	6.0 - 7.5	CHRYSANTHEMUM	6.0 - 7.0	PASQUE FLOWER	5.0 - 6.0
PEAR	6.0 - 7.5	BEGONIA	5.5 - 7.0	MIMOSA	5.0 - 7.0	CISSUS	6.0 - 7.5	PAULOWNIA	6.0 - 8.0
PINEAPPLE	5.0 - 6.0	BIRD OF PARADISE	6.0 - 6.5	MIND YOUR OWN BUSINESS	5.0 - 5.5	CISTUS	6.0 - 7.5	PENSTEMON	5.5 - 7.0
PLUM	6.0 - 7.5	BISHOP'S CAP	5.0 - 6.0	MONSTERA	5.0 - 6.0	CLARKIA	6.0 - 6.5	PERIWINKLE	6.0 - 7.5
POMEGRANATE	5.5 - 6.5	BLACK-EYED SUSAN	5.5 - 7.5	MYRTLE	6.0 - 8.0	CLIANTHUS	6.0 - 7.5	PETUNIA	6.0 - 7.5
QUINCE	6.0 - 7.5	BLOOD LEAF	5.5 - 6.5	NEVER NEVER PLANT	5.0 - 6.0	CLEMATIS	5.5 - 7.0	PINKS	6.0 - 7.5
RASPBERRY	5.0 - 7.5	BOTTLEBRUSH	6.0 - 7.5	NICODEMIA (INDOOR OAK)	6.0 - 8.0	COLCHICUM	5.5 - 6.5	POLYGONUM	6.0 - 7.5
RHUBARB	5.5 - 7.0	BOUGAINVILLEA	5.5 - 7.5	NORFOLK ISLAND PINE	5.0 - 6.0	COLUMBINE	6.0 - 7.0	POLYANTHUS	6.0 - 7.5
STRAWBERRY	5.0 - 7.5	BOXWOOD	6.0 - 7.5	OLEANDER	6.0 - 7.5	CONVOLVULUS	6.0 - 8.0	POPPY	6.0 - 7.5
WATERMELON	5.5 - 6.5	BROMELIADS	5.0 - 7.5	OPLISMENUS	5.0 - 6.0	COREOPSIS	5.0 - 6.0	PORTULACA	5.5 - 7.5
VEGETABLES AND HERBS		BUTTERFLY FLOWER	6.0 - 7.5	ORCHID	4.5 - 5.5	CORONILLA	6.5 - 7.5	PRIMROSE	5.5 - 6.5
ARTICHOKE	6.5 - 7.5	CACTI	4.5 - 6.0	OXALIS	6.0 - 8.0	CORYDALIS	6.0 - 8.0	PRIMULA	6.0 - 7.5
ASPARAGUS	6.0 - 8.0	CALCAOLARIA	6.0 - 7.0	PALMS	6.0 - 7.5	COSMOS	5.0 - 8.0	PRIVET	5.0 - 7.5
BASIL	5.5 - 6.5	CALADIUM	5.0 - 6.0	PANDANUS	5.0 - 6.0	COTTONEASTER	6.0 - 8.0	PRUNELLA	6.0 - 7.5
BEAN	6.0 - 7.5	CALLA LILY	6.0 - 7.0	PEACOCK PLANT	5.0 - 6.0	CRAB APPLE	6.0 - 7.5	PRUNUS	6.5 - 7.5
(Runner, Broad, French)		CAMELIA	4.5 - 5.5	PELLIONIA	5.0 - 6.0	CROCUS	6.0 - 8.0	PYRETHRUM	6.0 - 7.5
BEETROOT	6.0 - 7.5	CAMPANULA	5.5 - 6.5	PEPEROMIA	5.0 - 6.0	CYNOGLOSSUM	6.0 - 7.5	RED HOT POKER	6.0 - 7.5
BROCCOLI	6.0 - 7.0	CAPSICUM	5.0 - 6.5	PHILODENDRON	5.0 - 6.0	DAFFODIL	6.0 - 6.5	RHODODENDRON	4.5 - 6.0
BRUSSELS SPROUTS	6.0 - 7.5	CARDINAL FLOWER	5.0 - 6.0	PILEA	6.0 - 8.0	DAHLIA	6.0 - 7.5	ROSES:	
CABBAGE	6.0 - 7.5	CASTOR OIL PLANT	5.5 - 6.5	PLUMBAGO	5.5 - 6.5	DAY LILY	6.0 - 8.0	HYBRID TEA	5.5 - 7.0
CALABRESE	6.5 - 7.5	CANTURY PLANT	5.0 - 6.5	PODACARPUS	5.0 - 6.5	DELPHINIUM	6.0 - 7.5	CLIMBING	6.0 - 7.0
CARROT	5.5 - 7.0	CHINESE EVERGREEN	5.0 - 6.0	POINTSETTIA	6.0 - 7.5	DEUTZIA	6.0 - 7.5	RAMBLING	5.5 - 7.0
CAULIFLOWER	5.5 - 7.5	CHINESE PRIMROSE	6.0 - 7.5	POLYSCIAS	6.0 - 7.5	DIANTHUS	6.0 - 7.5	SALVIA	6.0 - 7.5
CELERY	6.0 - 7.0	CHRISTMAS CACTUS	5.0 - 6.5	POTHOS	5.0 - 6.0	DOGWOOD	5.0 - 7.0	SCABIOSA	5.0 - 7.5
CHICORY	5.0 - 6.5	CINERARIA	5.5 - 7.0	PRAYER PLANT	5.0 - 6.0	EDELWEISS	6.5 - 7.5	SEDUM	6.0 - 7.5
CHINESE CABBAGE	6.0 - 7.5	CLERODENDRUM	5.0 - 6.0	PUNICA	5.5 - 6.5	ELAEAGNUS	5.0 - 7.5	SNAPDRAGON	5.5 - 7.0
CHIVES	6.0 - 7.0	CLIVIA	5.5 - 6.5	SANSERIARIA	4.5 - 7.0	ENKANTHUS	5.0 - 6.0	SNOWDROP	6.0 - 8.0
CORN - SWEET	5.5 - 7.0	COCKSCOMB	6.0 - 7.0	SAXIFRAGA	6.0 - 8.0	ERICA	4.5 - 6.0	SOAPWORT	6.0 - 7.5
CRESS	6.0 - 7.0	COFFEE PLANT	5.0 - 6.0	SCINDAPSUS	5.0 - 6.0	EUPHORBIA	6.0 - 7.0	SPEEDWELL	5.5 - 6.5
COURGETTES	5.5 - 7.0	COLEUS	6.0 - 7.0	SHRIMP PLANT	6.0 - 7.0	EVERLASTINGS	5.0 - 6.0	SPIRAEA	6.0 - 7.5
CUCUMBER	5.5 - 7.5	COLUMNNEA	4.5 - 5.5	SPANISH BAYONET	6.0 - 7.5	FIRETHORN	6.0 - 8.0	SPRUCE	4.0 - 5.0
FENNEL	5.0 - 6.0	CORAL BERRY	5.5 - 7.5	SPIDER PLANT	6.0 - 7.5	FORGET-ME-NOTS	6.0 - 7.0	STOCK	6.0 - 7.5
GARLIC	5.5 - 7.5	CRASSULA	5.0 - 6.0	SUCCULENTS	5.0 - 6.5	FORSYTHIA	6.0 - 8.0	STONECROP	6.5 - 7.5
GINGER	6.0 - 8.0	CREEPING FIG	5.0 - 6.0	SYNOGONIUM	5.0 - 6.0	FOXGLOVE	6.0 - 7.5	SUMACK	5.0 - 6.5
HORSERADISH	6.0 - 7.0	CROTON	5.0 - 6.0	TOLMIEA	5.0 - 6.0	FRITILLARIA	6.0 - 7.5	SUNFLOWER	5.0 - 7.0
KALE	6.0 - 7.5	CROWN OF THORNS	6.0 - 7.5	TRADESCANTIA	5.0 - 6.0	FUCHSIA	5.5 - 7.5	SWEET PEA	6.0 - 7.5
KOHLRABI	6.0 - 7.5	CUPHEA	6.0 - 7.5	UMBRELLA TREE	5.0 - 7.5	GAILLARDIA	6.0 - 7.5	SWEET WILLIAM	6.0 - 7.5
LEEK	6.0 - 8.0	CYCLAMEN	6.0 - 7.0	VENUS FLYTRAP	4.0 - 5.0	GAZANIA	5.5 - 7.0	TAMARIX	6.5 - 8.0
LENTIL	5.5 - 7.0	CYPERUS	5.0 - 7.5	WEeping FIG	5.0 - 6.0	GENTIANA	5.0 - 7.5	TRILLIUM	5.0 - 6.5
LETTUCE	6.0 - 7.0	DIEFFENBACHIA	5.0 - 6.0	YUCCA	6.0 - 7.5	GEUM	6.0 - 7.5	TULIP	6.0 - 7.0
MARJORAM	6.0 - 8.0	DIPLODENIA	6.0 - 7.5	ZEBRINA	5.0 - 6.0	GLADIOILI	6.0 - 7.0	VIBERNUM	5.0 - 7.5
MARROW	6.0 - 7.5	DIZGOTHECA	6.0 - 7.5	FLOWERS, TREES AND SHRUBS		GLOBULARIA	5.5 - 7.0	VIOLA	5.5 - 6.5
MILLET	6.0 - 6.5	DRACAENA	5.0 - 6.0	ABELIA	6.0 - 8.0	GODETIA	6.0 - 7.5	VIRGINIA CREEPER	5.0 - 7.5
MINT	7.0 - 8.0	EASTER LILY	6.0 - 7.0	ACACIA	6.0 - 8.0	GOLDEN ROD	5.0 - 7.0	WALLFLOWER	5.5 - 7.5
MUSHROOM	6.5 - 7.5	ELEPHANT'S EAR	5.0 - 6.0	ACANTHUS	6.0 - 7.0	GYPHOPHILIA	6.0 - 7.5	WATER LILY	5.5 - 6.5
MUSTARD	6.0 - 7.5	EPISCIA	6.0 - 7.0	ACONITUM	5.0 - 6.0	HAWTHORN	6.0 - 7.0	WEIGELIA	6.0 - 7.5
OLIVE	5.5 - 6.5	EUONYMUS	6.0 - 8.0	ADONIS	6.0 - 8.0	HEATHER	4.0 - 6.0	WISTARIA	6.0 - 8.0
ONION	6.0 - 7.0	FERNS:		AGERATUM	6.0 - 7.5	HELIANTHUS	5.0 - 7.0	ZINNIA	5.5 - 7.5
PAPRIKA	7.0 - 8.5	BIRD'S NEST	5.0 - 5.5	AILANTHUS	6.0 - 7.5	HELLEBORUS	6.0 - 7.5	TURF AND ORNAMENTAL GRASSES	
PARSLEY	5.0 - 7.0	BOSTON	5.5 - 6.5	AJUGA	4.0 - 6.0	HOLLY	5.0 - 6.5	BAHAI	6.5 - 7.5
PARSNIP	5.5 - 7.5	BUTTON	6.0 - 8.0	ALTHEA	6.0 - 7.5	HOLLYHOCK	6.0 - 7.5	BENT	5.5 - 6.5
PEA	6.0 - 7.5	CHRISTMAS	6.0 - 7.5	ALYSSUM	6.0 - 7.5	HONEYSUCKLE	6.0 - 7.5	BERMUDA	6.0 - 7.0
PEANUT	5.0 - 6.5	CLOAK	6.0 - 7.5	AMARANTHUS	6.0 - 6.5	HYACINTH	6.5 - 7.5	CANADA BLUE	4.5 - 6.4
PECAN	4.0 - 6.0	FEATHER	5.5 - 6.5	ANCHUSA	6.0 - 7.5	HYDRANGEA (Blue)	4.0 - 5.0	CLOVER	6.0 - 7.0
PEPPER	5.5 - 7.0	HART'S TONGUE	7.0 - 8.0	ANDROSACE	5.0 - 6.0	HYDRANGEA (Pink)	6.0 - 7.0	KENTUCKY BLUE	6.0 - 7.5
PEPPERMINT	6.0 - 7.5	HOLLY	4.5 - 6.0	ANEMONE	6.0 - 7.5	HYDRANGEA (White)	6.5 - 8.0	MEADOW	6.0 - 7.5
PISTACHIO	5.0 - 6.0	MAIDENHAIR	6.0 - 8.0	ANTHYLLIS	5.0 - 6.0	HYPERICUM	5.5 - 7.0	PAMPAS	6.0 - 8.0
POTATO	4.5 - 6.0	RABBITS FOOT	6.0 - 7.5	ARBUSUS	4.0 - 6.0	IRIS	5.0 - 6.5	RED TOP	6.0 - 6.5
POTATO - SWEET	5.5 - 6.0	SPLEENWORT	6.0 - 7.5	ARENARIA	6.0 - 8.0	IVY	6.0 - 7.5	RYE	6.0 - 7.0
PUMPKIN	5.5 - 7.5	FIG	5.0 - 6.0	ARISTEA	6.0 - 7.5	JUNIPER	5.0 - 6.5	ST. AUGUSTINE	6.5 - 7.5
RADISH	6.0 - 7.0	FITTONIA	5.5 - 6.5	ARMERIA	6.0 - 7.5	KALMIA	4.5 - 5.0	TALL FESCUE	6.0 - 7.0
RICE	5.0 - 6.5	FREESIA	6.0 - 7.5	ARNICA	5.0 - 6.5	KERRIA	6.0 - 7.0	VELVET BENT	5.0 - 6.0
ROSEMARY	5.0 - 6.0	GARDENIA	5.0 - 6.0			LABURNUM	6.0 - 7.0	ZOYSIA	6.0 - 7.0

Soil Test Kit Questions and Answers

Question: I tested my soil, the pH test worked, but the rest of the results are clear. What's wrong?

1. An error has been made in the testing process.
2. Nutrient levels are too low for the test to indicate.
3. The capsules have absorbed too much moisture prior to being used. The reaction has already occurred within the capsule itself.

Question: My pH test result came out dark blue, there is no blue on the pH color chart.

1. The water being used to perform the test is alkaline. Recommend distilled water for the testing process.
2. The soil pH is higher than 7.5. The color results change from greens to blues to purples as the pH rises.

Question: I got results on all but the Nitrogen portion of the kit.

1. Nitrogen leaches out of the soil very quickly, especially in sandy soil.
2. The form of Nitrogen the kit tests for is Nitrate, the form used by plants. Nitrate is formed through the natural Nitrogen cycle within the soil. It is possible to have Nitrogen present in the soil in a non-testable form.

Question: I tested fertilizer with the kit and still got no reaction!

The kit detects only the form of the nutrient used by the plant. These nutrients must break down to the form tested for, through the natural bacterial action and decay processes in the soil. In most cases fertilizers will not test correctly.

Question: I fertilized my soil as recommended in your instructions and then re-tested. My readings didn't change.

Because the nutrients need to break down, we recommend two to four weeks between fertilizing and re-testing.

Question: My soil will not settle to the bottom in the soil/water solution I've mixed.

Although the directions read the soil and water should settle for at least 10 minutes before proceeding, there is no harm in letting the soil settle much longer. Suggest the consumer mix the soil and water the evening or even the day before testing. Some very fine clay soil will not settle. For these few homeowners, the kit will not work.

Question: The testing capsule didn't dissolve.

The capsules must be opened and the testing powder poured into the test tube. There isn't enough water present to dissolve the capsule.

Question: The color result I got doesn't match any on the color chart.

1. If the result is the same "color" but a different "shade" it's a matter of a judgment decision between the different nutrient levels.
2. The consumer may have inadvertently used the wrong capsule for the test in question.

In most cases we offer to send the consumer additional reagent capsules for re-testing. If an error was made in the first testing process, it's generally corrected the second time through.

HoldAll®
Decorative Plant Accessories

40 TESTS
DIRECTIONS INSIDE

SOIL TEST KIT

Tests Your Soil for a Healthy Garden

• pH • Nitrogen(N) • Phosphorus(P) • Potassium(K) •

WHY TEST YOUR SOIL?

Plants need food (nutrients) for healthy growth. Nitrogen, Phosphorus and Potash (N, P and K for short), play a vital role in plant growth just as vitamins, minerals, carbohydrates and protein do in our health.

HOW TO TEST YOUR SOIL

For the new and experienced soil testers alike, you will appreciate this easy, fast and fun way to achieve better growing results from your gardening efforts!

Everything is color-coded, including the tubes and capsules. All you do is take a sample of soil, mix with water, add powder from capsule, shake and watch the color develop. Then, note your test results. Fast, easy and it only takes a few minutes!

WHEN TO TEST YOUR SOIL

Soil should be tested periodically throughout the growing season, but it is especially recommended to test before planting in Spring and when preparing beds in Fall. And, if you feel your plants are not growing well, a soil test may help.

Included in the kit are:

40 test capsules, 10 each for pH, N, P and K, Four (4) Color-coded Test Tubes, Test Tube Storage Dock, complete instructions for adjusting soil pH, fertilization guidelines and pH preference list for over 450 plants for the home, yard and garden.

Soil Test Kit Components

Complete Instruction booklet Inside.



60183L

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APPENDIX I

Correspondence & Notifications

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



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

QUESTIONS

Action 359046

QUESTIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 359046
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1928154373
Incident Name	NAB1928154373 RDX FEDERAL 17 #035H @ 30-015-43884
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-43884] RDX FEDERAL 17 #035H

Location of Release Source	
Site Name	RDX FEDERAL 17 #035H
Date Release Discovered	09/08/2019
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	3,400
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/03/2024
Time sampling will commence	08:30 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions
Please provide any information necessary for navigation to sampling site	From Tarbrush Rd/Pipeline Rd head east on Pipeline Rd for approx 3.34 mi, turn right for approx 1 mi. turn right for approx. 1 mi. to reach location.

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CONDITIONS

Action 359046

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 359046
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraleay	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	6/27/2024

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Santa Fe, NM 87505

QUESTIONS

Action 395587

QUESTIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 395587
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1928154373
Incident Name	NAB1928154373 RDX FEDERAL 17 #035H @ 30-015-43884
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-43884] RDX FEDERAL 17 #035H

Location of Release Source

Site Name	RDX FEDERAL 17 #035H
Date Release Discovered	09/08/2019
Surface Owner	Federal

Sampling Event General Information*Please answer all the questions in this group.*

What is the sampling surface area in square feet	3,400
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/29/2024
Time sampling will commence	07:00 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions.
Please provide any information necessary for navigation to sampling site	From Tarbrush Rd/Pipeline Rd head east on Pipeline Rd for approx 3.34 mi, turn right for approx 1 mi. turn right for approx. 1 mi. to reach location.

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CONDITIONS

Action 395587

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 395587
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraleay	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	10/24/2024

APPENDIX J

Archived Reports

P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213





LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

December 4, 2019

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210**RE: Deferral Request
 WPX Energy Permian, Inc.
 Remediation Permit Number 2RP-5649
 RDX Federal 17 #035H
 Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, Inc. (WPX), presents the following Deferral Request detailing soil sampling and excavation activities at the RDX Federal 17 #035H (Site) in Unit D, Section 17, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil following an event that resulted in the release of produced water to the pipeline right-of-way south of the well pad. Based on the excavation activities and results of the soil sampling events, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting to leave impacted soil in the top 4 feet near active production equipment in place until final reclamation.

BACKGROUND

On September 8, 2019, a check valve failed resulting in the release of 10 barrels (bbls) of produced water to the pipeline right-of-way surface south of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 4 bbls of produced water were recovered. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on September 16, 2019, and was assigned Remediation Permit (RP) Number 2RP-5649 (Attachment 1).

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on known aquifer properties and the elevation difference between the Site and an identified water well. The nearest permitted water well with depth to water data is C 01360, located approximately 6,153 feet north of the Site. Water well C 01360 has a reported





Bratcher, M.
Page 2

depth to water of 173 feet bgs and is approximately 23 feet higher in elevation than the Site. The closest significant watercourse to the Site is a dry arroyo located approximately 1,225 feet north of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within an unstable area, 100-year floodplain, or overlying a subsurface mine. The Site is located in a medium-potential karst area.

Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride. However, the top 4 feet of the release area is to be reclaimed immediately and therefore the reclamation standard of 600 mg/kg is being applied to the top 4 feet of impacted material.

PRELIMINARY SOIL SAMPLING

On September 9, 2019, LTE personnel inspected the Site to evaluate the release extent. LTE personnel collected one preliminary soil sample (SS01) within the release extent from a depth of approximately 0.5 feet bgs to assess soil impacts. The release extent and preliminary soil sample location were mapped using a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. The soil sample was placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Based on visible surface staining and laboratory analytical results for preliminary soil sample SS01, excavation of impacted soil was warranted. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

DELINEATION AND EXCAVATION SOIL SAMPLING

On September 13, 2019, three potholes (PH01 through PH03) were advanced within the release area. Using excavation equipment, potholes were advanced to depths ranging from 4 feet bgs in PH03 to 7 feet bgs in PH02. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 °C under strict COC procedures to Xenco in Midland, Texas, for analysis of chloride following USEPA Method 300.0. Pothole PH03 was limited in depth due to the presence of the 12-inch concrete water line that was identified in the northern portion of the release area. The line is owned by Solaris Water Midstream, LLC (Solaris).





Bratcher, M.
Page 3

Upon the discovery of the line, Solaris notified LTE that no ground disturbing activities could occur within 15 feet of the line without a representative on site. The pothole locations are depicted on Figure 2. Soil Sampling Logs are included as Attachment 3.

From November 21 through 26, 2019, LTE was on site to oversee excavation activities within the release area. Excavation activities were directed by field screening soil samples for volatile aromatic hydrocarbons using a photo-ionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The extents of the excavations were limited due to safety concerns associated with the Solaris 12-inch water line, surface poly lines, and sub surface pipelines. Following completion of excavation activities, 5-point composite confirmation soil samples were collected from the floor (samples labeled as "FS") and sidewalls (samples labeled as "SW") of the excavation areas. Each soil sample represented at most 200 square feet. Approximately 275 cubic yards of impacted soil were removed from the excavation area and transported to the R360 Red Bluff Facility in Orla, Texas for disposal. The excavation areas measured a total of approximately 1,600 square feet in area and ranged in depth from 2 feet to 4 feet bgs in depth. The excavation area to the north near the Solaris water line was dictated by a Solaris representative, who was on site. The Solaris representative did not allow the excavation to advance deeper than 2 feet bgs. The excavation area and soil sample locations are depicted on Figure 3.

Additionally, on November 26, 2019, six potholes (PH04 through PH09) were advanced to delineate the lateral extent of remaining soil impacts. Using excavation equipment, potholes were advanced to a depth of 4 feet bgs. Soil samples were collected from each pothole at depths of 0.5 feet bgs and from 4 feet bgs. Soil samples were handled and analyzed as previously stated. The pothole locations are depicted on Figure 2. Soil Sampling Logs are included as Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated that the preliminary soil sample SS01 was compliant with the Closure Criteria but exceeded 600 mg/kg for chloride concentration in the top four feet. Impacted soil was excavated to the extent possible as allowed by the Solaris representative and health and safety protocol. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all excavation sidewall and floor samples. However, laboratory analytical results indicated that chloride concentrations in excavation samples FS06 through FS09, SW01, SW02, and SW04 that were collected less than 4 feet bgs exceeded the BLM preferred chloride closure criteria.

Further excavation of impacted soil beyond excavation samples FS06 through FS09, SW01, SW02, and SW04 was limited by the presence of above ground and subsurface active pipelines. Safety policy restricted soil disturbing activities around active production equipment and pipelines. This safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the production equipment or pipelines.





Bratcher, M.
Page 4

Laboratory analytical results for the delineation soil samples collected from potholes indicate BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and 600 mg/kg chloride in the top four feet of the subsurface. Therefore, no further excavation was warranted in the pipeline right-of-way. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS

A total of approximately 275 cubic yards of impacted soil were excavated from the Site; however, impacted soil exceeding the reclamation standard of 600 mg/kg chloride in the top 4 feet of the subsurface was left in place for compliance with the safety policy regarding earth moving activities near active pipelines. Impacted soil was excavated to the extent possible. The impacted soil remaining in place is delineated vertically and laterally by potholes PH01 through PH09. An estimated 410 cubic yards of impacted soil remain in place between 0 feet and 4 feet bgs based on excavation confirmation and delineation soil samples that were compliant with the NMOCD Table 1 Closure Criteria and the reclamation standard.

WPX requests to backfill the existing excavations and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and WPX do not believe deferment will result in imminent risk to human health, the environment, or groundwater. WPX requests deferral of final remediation permit number 2RP-5649. Upon approval of this deferral request, WPX will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1.

If you have any questions or comments, please do not hesitate to contact Mr. Chris McKisson at (970) 285-9985 or cmckisson@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read "Chris McKisson".

Chris McKisson
Project Environmental Scientist

A handwritten signature in black ink, appearing to read "Ashley L. Ager".

Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jim Raley, WPX

Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, BLM





Bratcher, M.
Page 5

Attachments:

- Figure 1 Site Location Map
- Figure 2 Site Map
- Figure 3 Excavation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Form C-141
- Attachment 2 Photographic Log
- Attachment 3 Soil Sampling Logs
- Attachment 4 Laboratory Analytical Reports



FIGURES



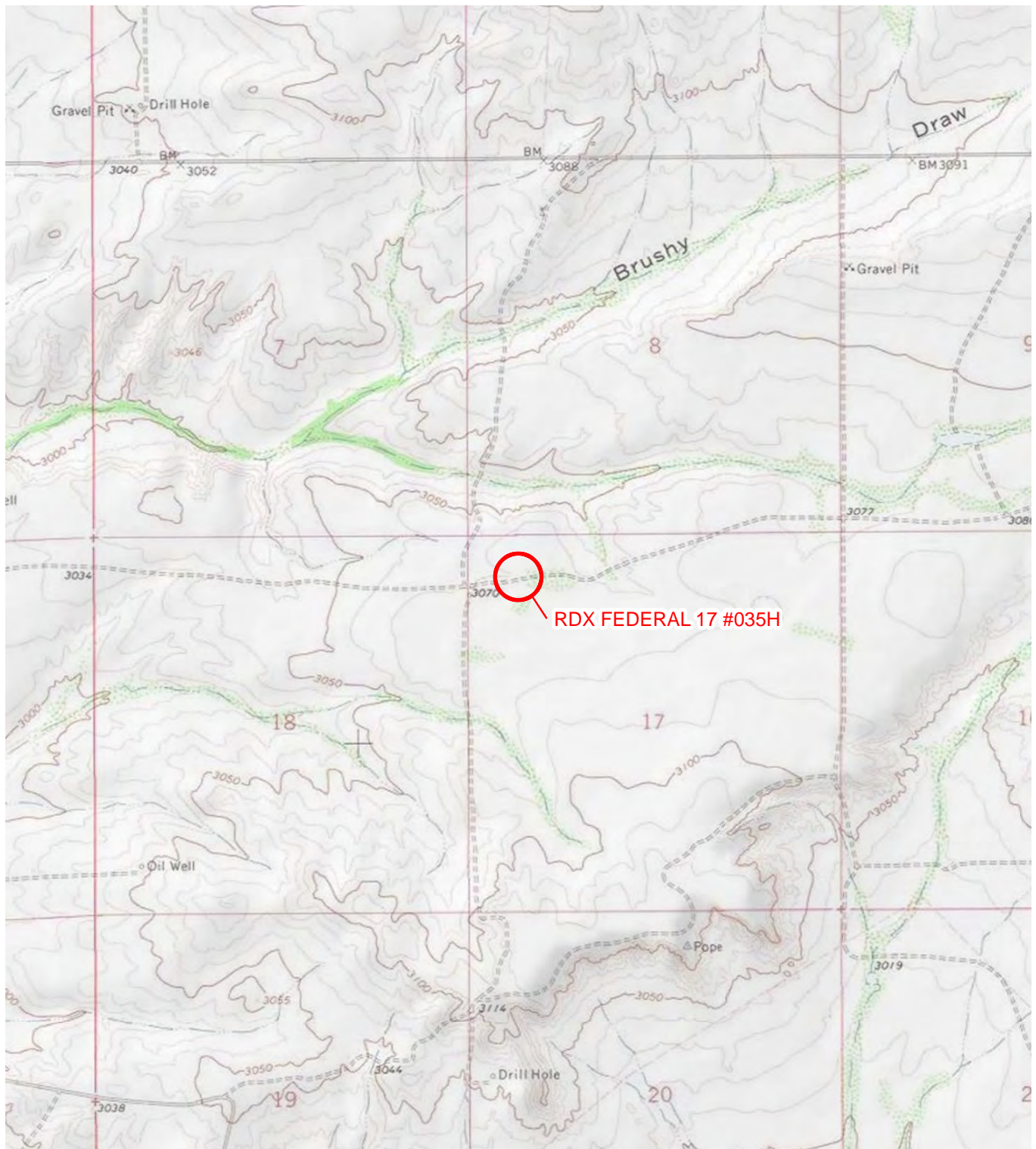


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

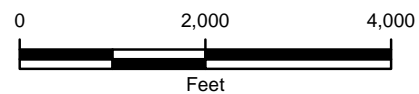
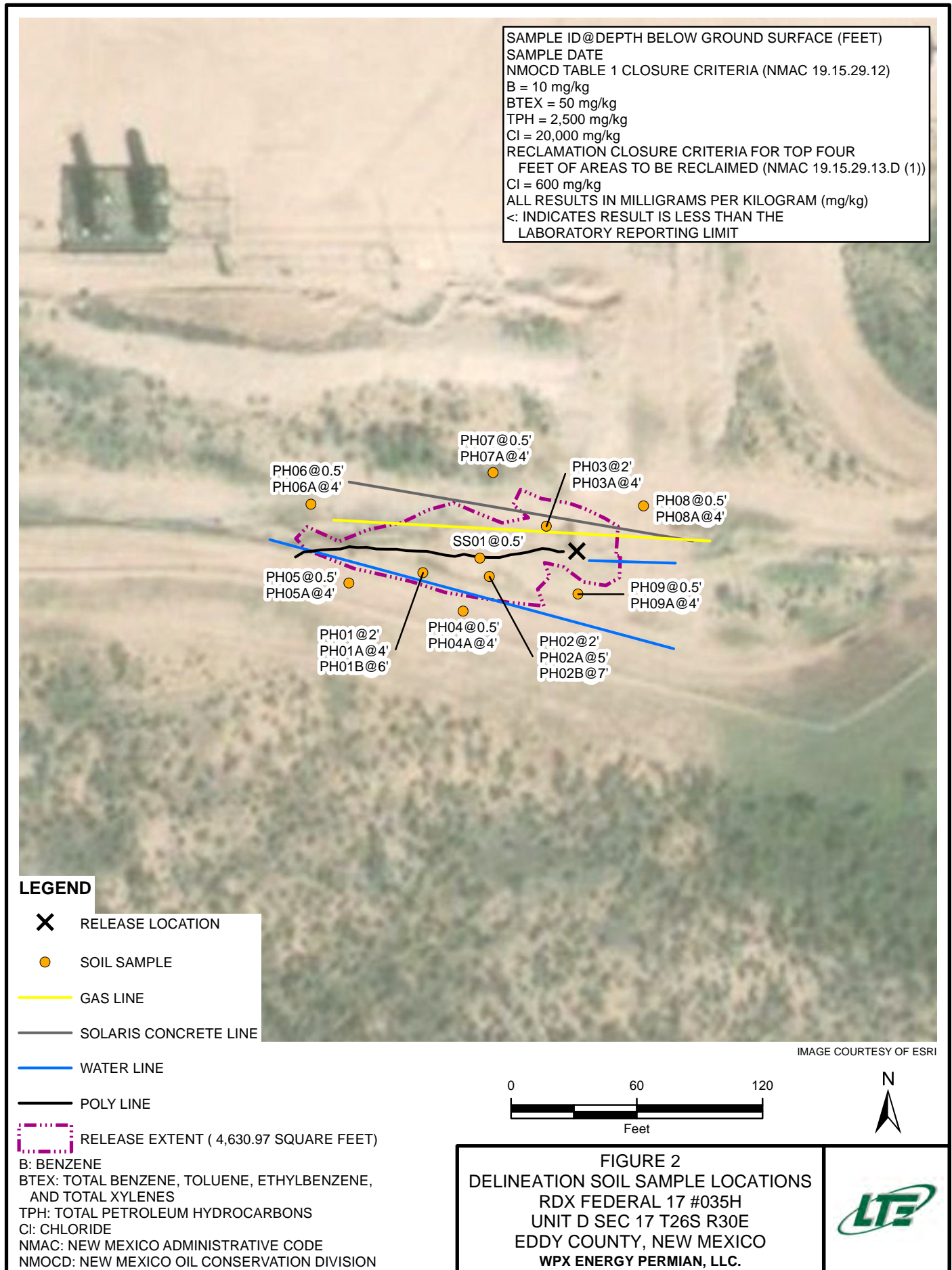


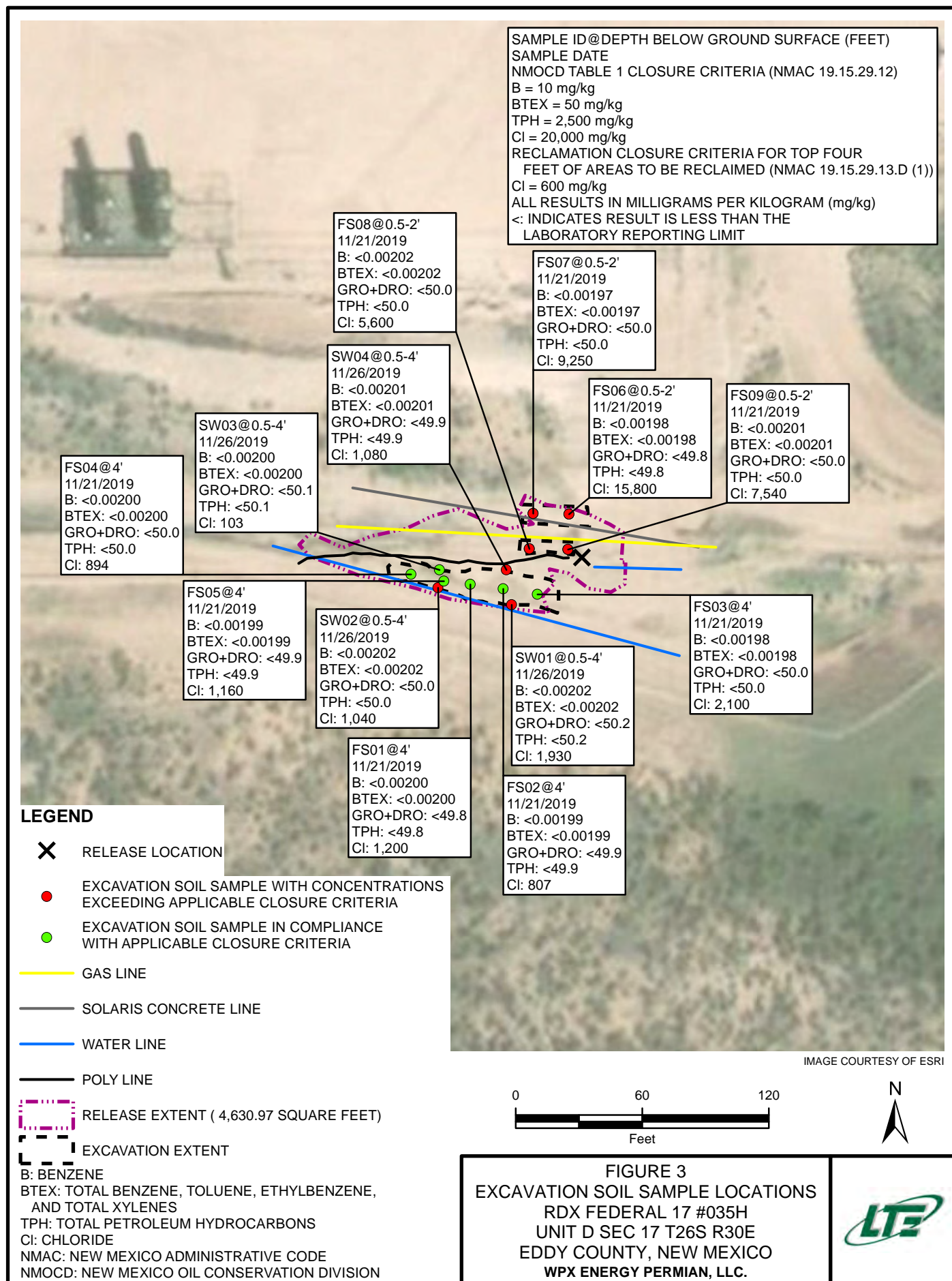
FIGURE 1
SITE LOCATION MAP
RDX FEDERAL 17 #035H
UNIT D SEC 17 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.



P:\WPX\GIS\MXD\034819046_RDX_17-35\034819046_FIG01_SL_2019.mxd



P:\WPX\GIS\MXD\034819046_RDX_17-35\034819046_FIG02_DELINEATION_2019.mxd



TABLE



TABLE 1
SOIL ANALYTICAL RESULTS

RDX Federal 17 #035H
REMEDATION PERMIT NUMBER 2RP-5649
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Sum of GRO + DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	09/09/2019	0.00444	0.0252	0.00394	0.0738	0.107	43.4	63.4	<24.9	107	107	13,800*
PH01	2	09/13/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	691*
PH01A	4	09/13/2019	-	-	-	-	-	-	-	-	-	-	938*
PH01B	6	09/13/2019	-	-	-	-	-	-	-	-	-	-	73.4*
PH02	2	09/13/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	<24.9	<24.9	<24.9	<24.9	890*
PH02A	5	09/13/2019	-	-	-	-	-	-	-	-	-	-	308*
PH02B	7	09/13/2019	-	-	-	-	-	-	-	-	-	-	109*
PH03	2	09/13/2019	-	-	-	-	-	-	-	-	-	-	6,830*
PH03A	4	09/13/2019	-	-	-	-	-	-	-	-	-	-	4,670*
PH04	0.5	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	186*
PH04A	4	11/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	13.6*
PH05	0.5	11/26/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	36.3*
PH05A	4	11/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	11.5*
PH06	0.5	11/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	<10.0*
PH06A	4	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	73.6*
PH07	0.5	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	<9.82*
PH07A	4	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	17.3*
PH08	0.5	11/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	14.0*
PH08A	4	11/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	54.3*
PH09	0.5	11/26/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<49.8	<49.8	<49.8	<49.8	<49.8	50.6*
PH09A	4	11/26/2019	<0.00196	<0.00196	<0.00196	<0.00196	<0.00196	<49.8	<49.8	<49.8	<49.8	<49.8	73.1*
FS01	4	11/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	1,200*
FS02	4	11/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	807*
FS03	4	11/26/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	2,100*
FS04	4	11/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	894*
FS05	4	11/26/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	1,160*
FS06	0.5 - 2	11/26/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	15,800*
FS07	0.5 - 2	11/26/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<50.0	<50.0	<50.0	<50.0	<50.0	9,250*
FS08	0.5 - 2	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	5,600*
FS09	0.5 - 2	11/26/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	7,540*
SW01	0.5 - 4	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	1,930*
SW02	0.5 - 4	11/26/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	1,040*
SW03	0.5 - 4	11/26/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	103*
SW04	0.5 - 4	11/26/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	1,080*
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCDC - New Mexico Oil Conservation Division
- not analyzed

DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits

Bold- indicates result exceeds the applicable regulatory standard

* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

Table 1 - closure criteria for soils impacted by a release per NMOCDC 19.15.29 August 2018 NMOCDC - New Mexico Administrative Code

ATTACHMENT 1: FORM C-141



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	NAB1928154373
District RP	2RP-5649
Facility ID	
Application ID	pAB1928154046

Release Notification I9KF0-190916-C-1410

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: james.ralej@wpxenergy.com	Incident # (assigned by OCD) NAB1928154373
Contact mailing address: 5315 Buena Vista Dr., Carlsbad, NM 88220	

Location of Release Source

Latitude 32.0492796 Longitude -103.909725
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RDX FEDERAL 17 #035H	Site Type: Production Facility
Date Release Discovered: 9/8/2019	API# (if applicable): 30-015-43884

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

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: Bureau of Land Management)

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) 10	Volume Recovered (bbls) 4
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" 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: Check valve on produced water line header failed, allowing release of 10 bbls of produced water on pipeline ROW, of which 4bbls was recovered. No waterways were threatened nor public health endangered.

Form C-141

Page 2

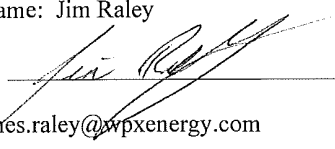
State of New Mexico
Oil Conservation Division

Incident ID	NAB1928154373
District RP	2RP-5649
Facility ID	
Application ID	pAB1928154046

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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 <u>not</u> 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: Jim Raley	Title: Environmental Specialist
Signature: 	Date: 9/16/2019
email: james.raley@wpxenergy.com	Telephone: 575-689-7597
<u>OCD Only</u>	
Received by: <u>Amalia Bustamante</u>	Date: <u>10/7/2019</u>

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5649
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?	<u>>100</u> (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 ½-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.

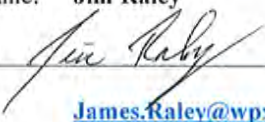
Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5649
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: **Jim Raley**Title: **Environmental Specialist**Signature: Date: **12/4/2019**email: James.Raley@wpenergy.comTelephone: **575-689-7597****OCD Only**

Received by: _____

Date: _____

Form C-141

Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5649
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: **Jim Raley**Title: **Environmental Specialist**Signature: Date: **12/4/2019**email: James.Raley@wpenergy.comTelephone: **575-689-7597****OCD Only**

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved


Signature: _____ Date: _____

ATTACHMENT 2: PHOTOGRAPHIC LOG






Southern view of the release extent near the release source.

Project: 034819046	WPX Energy Permian, Inc. RDX Federal 17 #035H	 Advancing Opportunity
November 9, 2019	Photographic Log	




Southwestern view of the release extent.

Project: 034819046	WPX Energy Permian, Inc. RDX Federal 17 #035H	 Advancing Opportunity
November 9, 2019	Photographic Log	

S




Western view at the release point overlooking the release extent.

Project: 034819046	WPX Energy Permian, Inc. RDX Federal 17 #035H	 Advancing Opportunity
November 21, 2019	Photographic Log	




Western view of the excavation at 4 ft depth.

Project: 034819046	WPX Energy Permian, Inc. RDX Federal 17 #035H	 Advancing Opportunity
November 26, 2019	Photographic Log	





Eastern view of the excavations.


Project: 034819046	WPX Energy Permian, Inc. RDX Federal 17 #035H	 Advancing Opportunity
November 26, 2019	Photographic Log	


ATTACHMENT 3: SOIL SAMPLING LOGS





 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH01		Date: 9/13/19	
					Project Name: RDX Federal 17-35		RP Number: 2RP-5649	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Lynda Laumbach		Method: Backhoe	
Lat/Long: Collector			Field Screening: Hach Chloride Strips (Low Range) & PID			Hole Diameter: N/A		Total Depth: 6 ft
Comments: N/C Field screening not collected in the field. *Chloride results displayed were analyzed by a lab								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	691*	N/C	No	PH01	0			
					1			
					2	2 ft	Caliche	dry, light tan well-cemented caliche with a uniform, well-sorted sandy (m.) matrix
					3			
DRY	938*	N/C	No	PH01A	4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
					5			
DRY	73.4*	N/C	No	PH01B	6	6 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
					TOT Depth			
					7			
					8			
					9			
					10			
					11			
					12			


 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH02		Date: 9/13/19		
					Project Name: RDX Federal 17-35		RP Number: 2RP-5649		
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Lynda Laumbach		Method: Backhoe		
Lat/Long: Collector			Field Screening: Hach Chloride Strips (Low Range) & PID			Hole Diameter: N/A		Total Depth: 7 ft	
Comments: N/C Field screening not collected in the field. *Chloride results displayed were analyzed by a lab									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks	
DRY	890*	N/C	No	PH02	0	2 ft	Caliche	dry, light tan well-cemented caliche with a uniform, well-sorted sandy (m.) matrix	
					1				
					2				
					3				
					4				
DRY	308*	N/C	No	PH02A	5	5 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix	
					6				
DRY	109*	N/C	NO	PH02B	7	7 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix	
								TOT Depth	
					8				
					9				
					10				
					11				
					12				

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: PH03		Date: 9/13/19	
					Project Name: RDX Federal 17-35		RP Number: 2RP-5649	
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Lynda Laumbach		Method: Backhoe	
Lat/Long: Collector			Field Screening: Hach Chloride Strips (Low Range) & PID		Hole Diameter: N/A		Total Depth: 4 ft	
Comments: N/C Field screening not collected in the field. *Chloride results displayed were analyzed by a lab								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	6830*	N/C	No	PH03	2	2 ft	Caliche	dry, light tan well-cemented caliche with a uniform, well-sorted sandy (m.) matrix
DRY	4670*	N/C	No	PH03A	4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
					TOT Depth			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH04	Date: 11/26/19					
		Project Name: RDX Federal 17-35	RP Number: 2RP-5649					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Backhoe					
Lat/Long: Collector		Field Screening: Hach Chloride Strips (Low Range) & PID	Hole Diameter: N/A Total Depth: 4 ft					
Comments: Chloride test performed with 1 part soil and 4 parts distilled water (dilution).								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<120	0	No	PH04	0	0.5 ft	SP-SM	dry, brown poorly-graded sand (m.) with silt; non-plastic, no odor, trace organics
DRY	<120	0	No		2	2 ft	Caliche	dry, light tan well-cemented caliche with a uniform, well-sorted sandy (m.) matrix
DRY	172	0	No	PH04A	4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
TOT DEPTH								
<div style="position: relative; height: 400px;"> <div style="position: absolute; top: 0; right: 0; width: 100%; height: 100%; border-left: 1px solid black; border-bottom: 1px solid black;"></div> </div>								

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH06		Date: 11/26/19		
				Project Name: RDX Federal 17-35		RP Number: 2RP-5649		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: Anna Byers		Method: Backhoe		
Lat/Long: Collector		Field Screening:		Hole Diameter: N/A		Total Depth: 4 ft		
		Hach Chloride Strips (Low Range) & PID						
Comments: Chloride test performed with 1 part soil and 4 parts distilled water (dilution).								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<120	0	No	PH06	0	0.5 ft	SP-SM	dry, brown poorly-graded sand (m.) with silt; non-plastic, no odor, trace organics
					1			
DRY	<120	0	No		2	2 ft	Caliche	
					3			
DRY	<120	0	No	PH06A	4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
					TOT DEPTH			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

<div><div>LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 <i>Compliance · Engineering · Remediation</i></div></div>					Identifier: PH08		Date: 11/26/19				
					Project Name: RDX Federal 17-35		RP Number: 2RP-5649				
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Backhoe	
Lat/Long: Collector				Field Screening: Hach Chloride Strips (Low Range) & PID				Hole Diameter: N/A		Total Depth: 4 ft	
Comments: Chloride test performed with 1 part soil and 4 parts distilled water (dilution).											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks			
DRY	<120	0	No	PH08	0	0.5 ft	SP-SM	dry, brown poorly-graded sand (m.) with silt; non-plastic, no odor, trace organics			
					1						
					2	2 ft	Caliche				
DRY	<120	0	No		3						
					4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix			
DRY	<120	0	No	PH08A	4	4 ft	Caliche	TOT DEPTH			
					5						
					6						
					7						
					8						
					9						
					10						
					11						
					12						

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH09		Date: 11/26/19				
		Project Name: RDX Federal 17-35		RP Number: 2RP-5649				
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: Collector		Field Screening: Hach Chloride Strips (Low Range) & PID		Logged By: Anna Byers				
				Method: Backhoe				
				Hole Diameter: N/A				
				Total Depth: 4 ft				
Comments: Chloride test performed with 1 part soil and 4 parts distilled water (dilution).								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
DRY	<120	0	No	PH09	0	0.5 ft	SP-SM	dry, brown poorly-graded sand (m.) with silt; non-plastic, no odor, trace organics
DRY	<120	0	No		2	2 ft	Caliche	dry, light tan well-cemented caliche with a uniform, well-sorted sandy (m.) matrix
DRY	<120	0	No	PH09A	4	4 ft	Caliche	dry, light tan moderately cemented caliche with a uniform, well-sorted sandy (m.) matrix
TOT DEPTH								
<div style="position: relative; height: 400px;"> <div style="position: absolute; top: 0; right: 0; width: 100%; height: 100%; border-left: 1px solid black; border-bottom: 1px solid black;"></div> </div>								

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS



Analytical Report 636391

for
LT Environmental, Inc.

Project Manager: Chris McKisson

RDX 17-35

34819046

12-SEP-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



12-SEP-19

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **636391**

RDX 17-35

Project Address:

Chris McKisson:

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 XENCO Report Number(s) 636391. 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 XENCO Laboratories. 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. 636391 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 636391

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09-09-19 10:50	0.5 ft	636391-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-35

Project ID: 34819046
Work Order Number(s): 636391

Report Date: 12-SEP-19
Date Received: 09/10/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101116 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3101140 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 636389-001 S.



Certificate of Analysis Summary 636391

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-35

Project Id: 34819046
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Sep-10-19 08:05 am
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636391-001					
	Field Id:	SS01					
	Depth:	0.5- ft					
	Matrix:	SOIL					
	Sampled:	Sep-09-19 10:50					
BTEX by EPA 8021B	Extracted:	Sep-10-19 10:09					
	Analyzed:	Sep-10-19 15:20					
	Units/RL:	mg/kg RL					
Benzene		0.00444 0.00101					
Toluene		0.0252 0.00101					
Ethylbenzene		0.00394 0.00101					
m,p-Xylenes		0.0537 0.00202					
o-Xylene		0.0201 0.00101					
Total Xylenes		0.0738 0.00101					
Total BTEX		0.107 0.00101					
Chloride by EPA 300	Extracted:	Sep-10-19 10:09					
	Analyzed:	Sep-10-19 16:27					
	Units/RL:	mg/kg RL					
Chloride		13800 D 498					
TPH by SW8015 Mod	Extracted:	Sep-10-19 11:30					
	Analyzed:	Sep-10-19 22:17					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		43.4 24.9					
Diesel Range Organics (DRO)		63.4 24.9					
Motor Oil Range Hydrocarbons (MRO)		<24.9 24.9					
Total GRO-DRO		107 24.9					
Total TPH		107 24.9					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 636391

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: **SS01** Matrix: Soil Date Received: 09.10.19 08.05
 Lab Sample Id: 636391-001 Date Collected: 09.09.19 10.50 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.10.19 10.09 Basis: Wet Weight
 Seq Number: 3101127

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13800	498	mg/kg	09.10.19 16.34	D	50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.10.19 11.30 Basis: Wet Weight
 Seq Number: 3101140

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	43.4	24.9	mg/kg	09.10.19 22.17		1
Diesel Range Organics (DRO)	C10C28DRO	63.4	24.9	mg/kg	09.10.19 22.17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.10.19 22.17	U	1
Total GRO-DRO	PHC628	107	24.9	mg/kg	09.10.19 22.17		1
Total TPH	PHC635	107	24.9	mg/kg	09.10.19 22.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	09.10.19 22.17	
o-Terphenyl	84-15-1	112	%	70-135	09.10.19 22.17	



Certificate of Analytical Results 636391

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: SS01	Matrix: Soil	Date Received: 09.10.19 08.05
Lab Sample Id: 636391-001	Date Collected: 09.09.19 10.50	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: DTH	Date Prep: 09.10.19 10.09	Basis: Wet Weight
Seq Number: 3101116		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00444	0.00101	mg/kg	09.10.19 15.20		1
Toluene	108-88-3	0.0252	0.00101	mg/kg	09.10.19 15.20		1
Ethylbenzene	100-41-4	0.00394	0.00101	mg/kg	09.10.19 15.20		1
m,p-Xylenes	179601-23-1	0.0537	0.00202	mg/kg	09.10.19 15.20		1
o-Xylene	95-47-6	0.0201	0.00101	mg/kg	09.10.19 15.20		1
Total Xylenes	1330-20-7	0.0738	0.00101	mg/kg	09.10.19 15.20		1
Total BTEX		0.107	0.00101	mg/kg	09.10.19 15.20		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.10.19 15.20		
1,4-Difluorobenzene	540-36-3	122	%	70-130	09.10.19 15.20		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Sample Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 636391

LT Environmental, Inc.

RDX 17-35

Analytical Method: Chloride by EPA 300

Seq Number: 3101127

MB Sample Id: 7685854-1-BLK

Matrix: Solid

LCS Sample Id: 7685854-1-BKS

Prep Method: E300P

Date Prep: 09.10.19

LCSD Sample Id: 7685854-1-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	259	104	259	104	90-110	0	20	mg/kg	09.10.19 12:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3101127

Parent Sample Id: 636389-001

Matrix: Soil

MS Sample Id: 636389-001 S

Prep Method: E300P

Date Prep: 09.10.19

MSD Sample Id: 636389-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	227	199	463	119	465	120	90-110	0	20	mg/kg	09.10.19 12:32	X

Analytical Method: Chloride by EPA 300

Seq Number: 3101127

Parent Sample Id: 636392-001

Matrix: Solid

MS Sample Id: 636392-001 S

Prep Method: E300P

Date Prep: 09.10.19

MSD Sample Id: 636392-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10600	4040	15500	121	15600	124	90-110	1	20	mg/kg	09.10.19 15:03	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101140

MB Sample Id: 7685918-1-BLK

Matrix: Solid

LCS Sample Id: 7685918-1-BKS

Prep Method: SW8015P

Date Prep: 09.10.19

LCSD Sample Id: 7685918-1-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)	<25.0	1000	899	90	918	92	70-135	2	35	mg/kg	09.10.19 14:22	
Diesel Range Organics (DRO)	<25.0	1000	843	84	855	86	70-135	1	35	mg/kg	09.10.19 14:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		123		128		70-135	%	09.10.19 14:22
o-Terphenyl	96		112		112		70-135	%	09.10.19 14:22

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 636391

LT Environmental, Inc.

RDX 17-35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101140

Parent Sample Id: 636389-001

Matrix: Soil

MS Sample Id: 636389-001 S

Prep Method: SW8015P

Date Prep: 09.10.19

MSD Sample Id: 636389-001 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)	<25.1	1010	1020	101	949	95	70-135	7	35	mg/kg	09.10.19 15:24	
Diesel Range Organics (DRO)	<25.1	1010	950	94	875	88	70-135	8	35	mg/kg	09.10.19 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	138	**	126		70-135	%	09.10.19 15:24
o-Terphenyl	122		113		70-135	%	09.10.19 15:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101116

MB Sample Id: 7685989-1-BLK

Matrix: Solid

LCS Sample Id: 7685989-1-BKS

Prep Method: SW5030B

Date Prep: 09.10.19

LCSD Sample Id: 7685989-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0787	79	0.0812	81	70-130	3	35	mg/kg	09.10.19 10:44	
Toluene	<0.00100	0.100	0.0947	95	0.0953	95	70-130	1	35	mg/kg	09.10.19 10:44	
Ethylbenzene	<0.00100	0.100	0.115	115	0.117	117	71-129	2	35	mg/kg	09.10.19 10:44	
m,p-Xylenes	<0.00200	0.200	0.236	118	0.240	120	70-135	2	35	mg/kg	09.10.19 10:44	
o-Xylene	<0.00100	0.100	0.118	118	0.122	122	71-133	3	35	mg/kg	09.10.19 10:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		111		107		70-130	%	09.10.19 10:44
4-Bromofluorobenzene	118		127		127		70-130	%	09.10.19 10:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101116

Parent Sample Id: 636389-001

Matrix: Soil

MS Sample Id: 636389-001 S

Prep Method: SW5030B

Date Prep: 09.10.19

MSD Sample Id: 636389-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0991	98	0.0919	92	70-130	8	35	mg/kg	09.10.19 12:03	
Toluene	<0.00101	0.101	0.105	104	0.0979	98	70-130	7	35	mg/kg	09.10.19 12:03	
Ethylbenzene	<0.00101	0.101	0.117	116	0.110	111	71-129	6	35	mg/kg	09.10.19 12:03	
m,p-Xylenes	<0.00202	0.202	0.241	119	0.228	115	70-135	6	35	mg/kg	09.10.19 12:03	
o-Xylene	<0.00101	0.101	0.119	118	0.113	114	71-133	5	35	mg/kg	09.10.19 12:03	

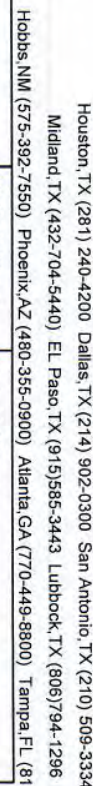
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		104		70-130	%	09.10.19 12:03
4-Bromofluorobenzene	128		126		70-130	%	09.10.19 12:03

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

Work Order No: 630391

Work Order Comments				
Program: UST/PST	<input checked="" type="checkbox"/> BRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:				
Reporting: Level II	<input checked="" type="checkbox"/> Level III	<input type="checkbox"/> PST/UST	<input type="checkbox"/> TRP	<input type="checkbox"/> Level IV
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

[illegible]

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	4.8				Thermometer ID		
Received Intact:	Yes	No			TN007		
Cooler Custody Seals:	Yes	No			Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No			Total Containers:	1	

Number of Containers

PA 8015)

EPA 0=8021)





e (EPA 300.0)

TAT starts the day received by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (I)	Chlorid	Sample Comments
5501	5	09/09/2019	10:50	0.5'	1	X	X	X	

Circle Method(s) and Metal(s) to be analyzed	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 SiO ₂ Na Sr Ti Sn U V Zn		
TC1P / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencro, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencro 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 Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		805 9-10-19			09-10-17 B.

Revised Date 05/14/18 Rev 2018



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/10/2019 08:05:00 AM

Work Order #: 636391

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)?	4.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	N/A
#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

*** 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: 09/10/2019

Checklist reviewed by:

Jessica Kramer

Date: 09/10/2019

Analytical Report 637305

for
LT Environmental, Inc.

Project Manager: Chris McKisson

RDX 17-35

034819046

23-SEP-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



23-SEP-19

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **637305**

RDX 17-35

Project Address:

Chris McKisson:

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 XENCO Report Number(s) 637305. 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 XENCO Laboratories. 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. 637305 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 637305****LT Environmental, Inc., Arvada, CO**

RDX 17-35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	09-13-19 09:30	2 ft	637305-001
PH01A	S	09-13-19 09:40	4 ft	637305-002
PH01B	S	09-13-19 09:50	6 ft	637305-003
PH02	S	09-13-19 10:00	2 ft	637305-004
PH02A	S	09-13-19 10:20	5 ft	637305-005
PH02B	S	09-13-19 10:40	7 ft	637305-006
PH03	S	09-13-19 11:00	2 ft	637305-007
PH03A	S	09-13-19 11:45	4 ft	637305-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 17-35

Project ID: 034819046
Work Order Number(s): 637305

Report Date: 23-SEP-19
Date Received: 09/18/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101958 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3102031 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are:
7686459-1-BSD,637191-021 S,637305-004.



Certificate of Analysis Summary 637305

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-35

Project Id: 034819046
Contact: Chris McKisson
Project Location:

Date Received in Lab: Wed Sep-18-19 01:45 pm
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637305-001	637305-002	637305-003	637305-004	637305-005	637305-006
	<i>Field Id:</i>	PH01	PH01A	PH01B	PH02	PH02A	PH02B
	<i>Depth:</i>	2- ft	4- ft	6- ft	2- ft	5- ft	7- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-13-19 09:30	Sep-13-19 09:40	Sep-13-19 09:50	Sep-13-19 10:00	Sep-13-19 10:20	Sep-13-19 10:40
BTEX by EPA 8021B	<i>Extracted:</i>	Sep-18-19 16:09			Sep-18-19 16:09		
	<i>Analyzed:</i>	Sep-19-19 04:37			Sep-19-19 04:57		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Benzene		<0.00101 0.00101			<0.000996 0.000996		
Toluene		<0.00101 0.00101			<0.000996 0.000996		
Ethylbenzene		<0.00101 0.00101			<0.000996 0.000996		
m,p-Xylenes		<0.00202 0.00202			<0.00199 0.00199		
o-Xylene		<0.00101 0.00101			<0.000996 0.000996		
Total Xylenes		<0.00101 0.00101			<0.000996 0.000996		
Total BTEX		<0.00101 0.00101			<0.000996 0.000996		
Chloride by EPA 300	<i>Extracted:</i>	Sep-18-19 16:00	Sep-18-19 16:00	Sep-18-19 16:00	Sep-18-19 16:00	Sep-18-19 16:00	Sep-18-19 16:00
	<i>Analyzed:</i>	Sep-19-19 12:16	Sep-18-19 20:27	Sep-18-19 20:33	Sep-18-19 20:40	Sep-18-19 20:46	Sep-18-19 21:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		691 D 20.0	938 99.4	73.4 D 9.90	890 50.4	308 20.2	109 D 50.4
TPH by SW8015 Mod	<i>Extracted:</i>	Sep-18-19 16:45			Sep-18-19 16:45		
	<i>Analyzed:</i>	Sep-19-19 18:31			Sep-19-19 18:52		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<25.0 25.0			<24.9 24.9		
Diesel Range Organics (DRO)		<25.0 25.0			<24.9 24.9		
Motor Oil Range Hydrocarbons (MRO)		<25.0 25.0			<24.9 24.9		
Total TPH		<25.0 25.0			<24.9 24.9		
Total GRO-DRO		<25.0 25.0			<24.9 24.9		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637305

LT Environmental, Inc., Arvada, CO

Project Name: RDX 17-35

Project Id: 034819046
Contact: Chris McKisson
Project Location:

Date Received in Lab: Wed Sep-18-19 01:45 pm
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637305-007	637305-008				
	Field Id:	PH03	PH03A				
	Depth:	2- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Sep-13-19 11:00	Sep-13-19 11:45				
Chloride by EPA 300	Extracted:	Sep-18-19 16:00	Sep-18-19 16:00				
	Analyzed:	Sep-18-19 21:12	Sep-18-19 21:19				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		6830 D 201	4670 D 202				

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 637305

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: **PH01** Matrix: Soil Date Received: 09.18.19 13.45
 Lab Sample Id: 637305-001 Date Collected: 09.13.19 09.30 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.18.19 16.00 Basis: Wet Weight
 Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	691	20.0	mg/kg	09.19.19 13.44	D	20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.18.19 16.45 Basis: Wet Weight
 Seq Number: 3102031

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.19.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.19.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.19.19 18.31	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.19.19 18.31	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.19.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	09.19.19 18.31	
o-Terphenyl	84-15-1	106	%	70-135	09.19.19 18.31	



Certificate of Analytical Results 637305

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: **PH01** Matrix: Soil Date Received: 09.18.19 13.45
 Lab Sample Id: 637305-001 Date Collected: 09.13.19 09.30 Sample Depth: 2 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: DTH Date Prep: 09.18.19 16.09 Basis: Wet Weight
 Seq Number: 3101958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.19.19 04.37	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.19.19 04.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	09.19.19 04.37		
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.19.19 04.37		

**Certificate of Analytical Results 637305****LT Environmental, Inc., Arvada, CO****RDX 17-35**Sample Id: **PH01A**

Matrix: Soil

Date Received:09.18.19 13.45

Lab Sample Id: 637305-002

Date Collected: 09.13.19 09.40

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.19 16.00

Basis: Wet Weight

Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	938	99.4	mg/kg	09.18.19 20.27		10

**Certificate of Analytical Results 637305****LT Environmental, Inc., Arvada, CO****RDX 17-35**Sample Id: **PH01B**

Matrix: Soil

Date Received:09.18.19 13.45

Lab Sample Id: 637305-003

Date Collected: 09.13.19 09.50

Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.19 16.00

Basis: Wet Weight

Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.4	9.90	mg/kg	09.19.19 17.30	D	1



Certificate of Analytical Results 637305

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: **PH02** Matrix: Soil Date Received: 09.18.19 13.45
 Lab Sample Id: 637305-004 Date Collected: 09.13.19 10.00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.18.19 16.00 Basis: Wet Weight
 Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	890	50.4	mg/kg	09.18.19 20.40		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.18.19 16.45 Basis: Wet Weight
 Seq Number: 3102031

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.19.19 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.19.19 18.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.19.19 18.52	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.19.19 18.52	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.19.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	147	%	70-135	09.19.19 18.52	**
o-Terphenyl	84-15-1	123	%	70-135	09.19.19 18.52	



Certificate of Analytical Results 637305

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: PH02	Matrix: Soil	Date Received: 09.18.19 13.45
Lab Sample Id: 637305-004	Date Collected: 09.13.19 10.00	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: DTH	Date Prep: 09.18.19 16.09	Basis: Wet Weight
Seq Number: 3101958		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.19.19 04.57	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.19.19 04.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	09.19.19 04.57		
4-Bromofluorobenzene	460-00-4	106	%	70-130	09.19.19 04.57		

**Certificate of Analytical Results 637305****LT Environmental, Inc., Arvada, CO****RDX 17-35**Sample Id: **PH02A**

Matrix: Soil

Date Received:09.18.19 13.45

Lab Sample Id: 637305-005

Date Collected: 09.13.19 10.20

Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.19 16.00

Basis: Wet Weight

Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	308	20.2	mg/kg	09.18.19 20.46		2

**Certificate of Analytical Results 637305****LT Environmental, Inc., Arvada, CO****RDX 17-35**Sample Id: **PH02B**

Matrix: Soil

Date Received:09.18.19 13.45

Lab Sample Id: 637305-006

Date Collected: 09.13.19 10.40

Sample Depth: 7 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.19 16.00

Basis: Wet Weight

Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	50.4	mg/kg	09.19.19 13.12	D	5

**Certificate of Analytical Results 637305****LT Environmental, Inc., Arvada, CO****RDX 17-35**

Sample Id: **PH03** Matrix: Soil Date Received: 09.18.19 13.45
Lab Sample Id: 637305-007 Date Collected: 09.13.19 11.00 Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 09.18.19 16.00 Basis: Wet Weight
Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6830	201	mg/kg	09.19.19 13.18	D	20



Certificate of Analytical Results 637305

LT Environmental, Inc., Arvada, CO

RDX 17-35

Sample Id: **PH03A**

Matrix: Soil

Date Received: 09.18.19 13.45

Lab Sample Id: 637305-008

Date Collected: 09.13.19 11.45

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.18.19 16.00

Basis: Wet Weight

Seq Number: 3101899

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4670	202	mg/kg	09.19.19 13.31	D	20



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 637305

LT Environmental, Inc.

RDX 17-35

Analytical Method: Chloride by EPA 300

Seq Number: 3101899

MB Sample Id: 7686418-1-BLK

Matrix: Solid

LCS Sample Id: 7686418-1-BKS

Prep Method: E300P

Date Prep: 09.18.19

LCSD Sample Id: 7686418-1-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	260	104	258	103	90-110	1	20	mg/kg	09.18.19 18:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3101899

Parent Sample Id: 637191-020

Matrix: Soil

MS Sample Id: 637191-020 S

Prep Method: E300P

Date Prep: 09.18.19

MSD Sample Id: 637191-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.71	200	204	100	216	106	90-110	6	20	mg/kg	09.18.19 19:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3101899

Parent Sample Id: 637312-001

Matrix: Solid

MS Sample Id: 637312-001 S

Prep Method: E300P

Date Prep: 09.18.19

MSD Sample Id: 637312-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1220	1010	2390	116	2400	117	90-110	0	20	mg/kg	09.18.19 21:44	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3102031

MB Sample Id: 7686459-1-BLK

Matrix: Solid

LCS Sample Id: 7686459-1-BKS

Prep Method: SW8015P

Date Prep: 09.18.19

LCSD Sample Id: 7686459-1-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)	<25.0	1000	951	95	986	99	70-135	4	35	mg/kg	09.19.19 15:45	
Diesel Range Organics (DRO)	<25.0	1000	914	91	942	94	70-135	3	35	mg/kg	09.19.19 15:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		133		138	**	70-135	%	09.19.19 15:45
o-Terphenyl	105		104		107		70-135	%	09.19.19 15:45

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 637305

LT Environmental, Inc.

RDX 17-35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3102031

Parent Sample Id: 637191-021

Matrix: Soil

MS Sample Id: 637191-021 S

Prep Method: SW8015P

Date Prep: 09.18.19

MSD Sample Id: 637191-021 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)	<25.1	1000	917	92	948	94	70-135	3	35	mg/kg	09.19.19 16:47	
Diesel Range Organics (DRO)	<25.1	1000	874	87	907	90	70-135	4	35	mg/kg	09.19.19 16:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	137	**	130		70-135	%	09.19.19 16:47
o-Terphenyl	102		110		70-135	%	09.19.19 16:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101958

MB Sample Id: 7686555-1-BLK

Matrix: Solid

LCS Sample Id: 7686555-1-BKS

Prep Method: SW5030B

Date Prep: 09.18.19

LCSD Sample Id: 7686555-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0813	81	0.0900	90	70-130	10	35	mg/kg	09.19.19 02:00	
Toluene	<0.00100	0.100	0.0977	98	0.0936	94	70-130	4	35	mg/kg	09.19.19 02:00	
Ethylbenzene	<0.00100	0.100	0.119	119	0.116	116	71-129	3	35	mg/kg	09.19.19 02:00	
m,p-Xylenes	<0.00200	0.200	0.242	121	0.233	117	70-135	4	35	mg/kg	09.19.19 02:00	
o-Xylene	<0.00100	0.100	0.120	120	0.116	116	71-133	3	35	mg/kg	09.19.19 02:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		107		102		70-130	%	09.19.19 02:00
4-Bromofluorobenzene	104		121		112		70-130	%	09.19.19 02:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101958

Parent Sample Id: 637191-021

Matrix: Soil

MS Sample Id: 637191-021 S

Prep Method: SW5030B

Date Prep: 09.18.19

MSD Sample Id: 637191-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0795	79	0.0831	82	70-130	4	35	mg/kg	09.19.19 03:18	
Toluene	<0.00101	0.101	0.0856	85	0.0825	82	70-130	4	35	mg/kg	09.19.19 03:18	
Ethylbenzene	<0.00101	0.101	0.0929	92	0.102	101	71-129	9	35	mg/kg	09.19.19 03:18	
m,p-Xylenes	<0.00201	0.201	0.189	94	0.206	102	70-135	9	35	mg/kg	09.19.19 03:18	
o-Xylene	<0.00101	0.101	0.0954	94	0.103	102	71-133	8	35	mg/kg	09.19.19 03:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		114		70-130	%	09.19.19 03:18
4-Bromofluorobenzene	127		130		70-130	%	09.19.19 03:18

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

Work Order No: 637305

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) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)



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Page 1 of 1

Work Order Comments

Program: ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund

State of Project:

Reporting Level: ☐ Level II ☐ Level III ☐ Level IV

Deliverables: ☐ EDD ☐ ADaPT ☐ Other:

Bill to: (if different) Chris McKisson

Company Name: LT Environmental

Address:

City, State ZIP:

Email: llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

ANALYSIS REQUEST										Work Order Notes
Project Name:	RDX 17-35	Turn Around								
Project Number:	34819046	Routine <input checked="" type="checkbox"/>								
P.O. Number:		Rush: <input type="checkbox"/>								
Sampler's Name:	Lynda Laumbach	Due Date:								
SAMPLE RECEIPT			Temp Blank: <input checked="" type="checkbox"/>	Wet Ice: <input checked="" type="checkbox"/>						
Temperature (°C):	0.0	Thermometer ID	T-NM-007							
Received Intact:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>								
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/>	N/A	Correction Factor: -0.2							
Sample Custody Seals:	Yes <input checked="" type="checkbox"/>	N/A	Total Containers: 8							
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)		
PH-01	S	08/13/2019	9:30	2'	1	X	X	X		
PH-02A	S		9:40	4'	1					
PH-02B	S		9:50	6'	1					
PH-02	S		10:00	2'	1	X	X	X		
PH-02A	S		10:20	5'	1					
PH-02B	S		10:40	7'	1					
PH-03	S		11:00	2'	1					
PH-03A	S		11:45	4'	1					
Final 1.000										

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 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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 \$75.00 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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		09/18/2019 13:45			
3					
5					

Revised Date 05/14/18 Rev. 2018.1



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/18/2019 01:45:00 PM

Work Order #: 637305

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)?	0
#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

*** 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: 09/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 09/20/2019

Analytical Report 644213

for
LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Federal 17-35H

034819046

26-NOV-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



26-NOV-19

Project Manager: **Chris McKisson**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **644213**

RDX Federal 17-35H

Project Address: Rural Eddy County

Chris McKisson:

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 XENCO Report Number(s) 644213. 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 XENCO Laboratories. 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. 644213 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 644213

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11-21-19 15:00	4 ft	644213-001
FS02	S	11-21-19 15:05	4 ft	644213-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *RDX Federal 17-35H*

Project ID: 034819046
Work Order Number(s): 644213

Report Date: 26-NOV-19
Date Received: 11/22/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3108683 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 644213

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 17-35H

Project Id: 034819046
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Fri Nov-22-19 09:13 am
Report Date: 26-NOV-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	644213-001	644213-002				
	Field Id:	FS01	FS02				
	Depth:	4- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Nov-21-19 15:00	Nov-21-19 15:05				
BTEX by EPA 8021B SUB: T104704400-19-19	Extracted:	Nov-25-19 11:45	Nov-25-19 11:45				
	Analyzed:	Nov-25-19 19:45	Nov-25-19 20:05				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00199 0.00199				
Toluene		<0.00200 0.00200	<0.00199 0.00199				
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199				
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398				
o-Xylene		<0.00200 0.00200	<0.00199 0.00199				
Xylenes, Total		<0.00200 0.00200	<0.00199 0.00199				
Total BTEX		<0.00200 0.00200	<0.00199 0.00199				
Chloride by EPA 300 SUB: T104704400-19-19	Extracted:	Nov-25-19 11:55	Nov-25-19 11:55				
	Analyzed:	Nov-25-19 13:31	Nov-25-19 13:52				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		1200 25.1	807 25.3				
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Nov-25-19 12:00	Nov-25-19 12:00				
	Analyzed:	Nov-25-19 22:10	Nov-25-19 22:32				
	Units/RL:	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 GRO-DRO		<49.8 49.8	<49.9 49.9				
Total TPH		<49.8 49.8	<49.9 49.9				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 644213

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS01**

Matrix: Soil

Date Received: 11.22.19 09.13

Lab Sample Id: 644213-001

Date Collected: 11.21.19 15.00

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 11.25.19 11.55

Basis: Wet Weight

Seq Number: 3108630

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	25.1	mg/kg	11.25.19 13.31		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 11.25.19 12.00

Basis: Wet Weight

Seq Number: 3108709

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.25.19 22.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.25.19 22.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.25.19 22.10	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.25.19 22.10	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.25.19 22.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.25.19 22.10	
o-Terphenyl	84-15-1	117	%	70-135	11.25.19 22.10	



Certificate of Analytical Results 644213

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS01**

Matrix: Soil

Date Received: 11.22.19 09.13

Lab Sample Id: 644213-001

Date Collected: 11.21.19 15.00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 11.25.19 11.45

Basis: Wet Weight

Seq Number: 3108683

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.25.19 19.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.25.19 19.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	11.25.19 19.45		
1,4-Difluorobenzene	540-36-3	110	%	70-130	11.25.19 19.45		



Certificate of Analytical Results 644213

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS02** Matrix: Soil Date Received: 11.22.19 09.13
 Lab Sample Id: 644213-002 Date Collected: 11.21.19 15.05 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 11.25.19 11.55 Basis: Wet Weight
 Seq Number: 3108630 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	807	25.3	mg/kg	11.25.19 13.52		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 11.25.19 12.00 Basis: Wet Weight
 Seq Number: 3108709 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.25.19 22.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.25.19 22.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.25.19 22.32	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.25.19 22.32	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.25.19 22.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.25.19 22.32	
o-Terphenyl	84-15-1	115	%	70-135	11.25.19 22.32	



Certificate of Analytical Results 644213

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS02**

Matrix: Soil

Date Received: 11.22.19 09.13

Lab Sample Id: 644213-002

Date Collected: 11.21.19 15.05

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 11.25.19 11.45

Basis: Wet Weight

Seq Number: 3108683

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.25.19 20.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.25.19 20.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	11.25.19 20.05		
4-Bromofluorobenzene	460-00-4	102	%	70-130	11.25.19 20.05		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 644213

LT Environmental, Inc.

RDX Federal 17-35H

Analytical Method: Chloride by EPA 300

Seq Number: 3108630

MB Sample Id: 7691116-1-BLK

Matrix: Solid

LCS Sample Id: 7691116-1-BKS

Prep Method: E300P

Date Prep: 11.25.19

LCSD Sample Id: 7691116-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	234	94	234	94	90-110	0	20	mg/kg	11.25.19 12:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3108630

Parent Sample Id: 644209-008

Matrix: Soil

MS Sample Id: 644209-008 S

Prep Method: E300P

Date Prep: 11.25.19

MSD Sample Id: 644209-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	97.4	200	305	104	296	99	90-110	3	20	mg/kg	11.25.19 12:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3108630

Parent Sample Id: 644209-017

Matrix: Soil

MS Sample Id: 644209-017 S

Prep Method: E300P

Date Prep: 11.25.19

MSD Sample Id: 644209-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	203	200	401	99	402	100	90-110	0	20	mg/kg	11.25.19 13:42	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3108709

MB Sample Id: 7691145-1-BLK

Matrix: Solid

LCS Sample Id: 7691145-1-BKS

Prep Method: SW8015P

Date Prep: 11.25.19

LCSD Sample Id: 7691145-1-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)	<15.0	1000	987	99	965	97	70-135	2	20	mg/kg	11.25.19 12:42	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	994	99	70-135	2	20	mg/kg	11.25.19 12:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		101		100		70-135	%	11.25.19 12:42
o-Terphenyl	110		100		88		70-135	%	11.25.19 12:42

Analytical Method: TPH by SW8015 Mod

Seq Number: 3108709

Matrix: Solid
MB Sample Id: 7691145-1-BLK

Prep Method: SW8015P

Date Prep: 11.25.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.25.19 12:21	

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 644213

LT Environmental, Inc.

RDX Federal 17-35H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3108709

Parent Sample Id: 644215-001

Matrix: Soil

MS Sample Id: 644215-001 S

Prep Method: SW8015P

Date Prep: 11.25.19

MSD Sample Id: 644215-001 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)	<15.0	999	1040	104	1070	107	70-135	3	20	mg/kg	11.25.19 15:06	
Diesel Range Organics (DRO)	40.0	999	1070	103	1120	108	70-135	5	20	mg/kg	11.25.19 15:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		115		70-135	%	11.25.19 15:06
o-Terphenyl	110		116		70-135	%	11.25.19 15:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3108683

MB Sample Id: 7691109-1-BLK

Matrix: Solid

LCS Sample Id: 7691109-1-BKS

Prep Method: SW5030B

Date Prep: 11.25.19

LCSD Sample Id: 7691109-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.109	109	70-130	3	35	mg/kg	11.25.19 13:06	
Toluene	<0.00200	0.100	0.104	104	0.104	104	70-130	0	35	mg/kg	11.25.19 13:06	
Ethylbenzene	<0.00200	0.100	0.106	106	0.108	108	70-130	2	35	mg/kg	11.25.19 13:06	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.221	111	70-130	2	35	mg/kg	11.25.19 13:06	
o-Xylene	<0.00200	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	11.25.19 13:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		112		111		70-130	%	11.25.19 13:06
4-Bromofluorobenzene	93		101		104		70-130	%	11.25.19 13:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3108683

Parent Sample Id: 644216-001

Matrix: Soil

MS Sample Id: 644216-001 S

Prep Method: SW5030B

Date Prep: 11.25.19

MSD Sample Id: 644216-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.126	127	0.133	133	70-130	5	35	mg/kg	11.25.19 13:46	X
Toluene	<0.00198	0.0992	0.106	107	0.110	110	70-130	4	35	mg/kg	11.25.19 13:46	
Ethylbenzene	<0.00198	0.0992	0.117	118	0.120	120	70-130	3	35	mg/kg	11.25.19 13:46	
m,p-Xylenes	<0.00397	0.198	0.0814	41	0.0840	42	70-130	3	35	mg/kg	11.25.19 13:46	X
o-Xylene	<0.00198	0.0992	0.136	137	0.150	150	70-130	10	35	mg/kg	11.25.19 13:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		113		70-130	%	11.25.19 13:46
4-Bromofluorobenzene	115		114		70-130	%	11.25.19 13:46

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 Crashtad, NM (432) 704-5440
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 1044219

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Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	cmckisson@ltenv.com

Program: <input type="checkbox"/> PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project:	
Reporting Level II <input type="checkbox"/>	Level III <input type="checkbox"/>
PST/UST <input type="checkbox"/>	TRRP <input type="checkbox"/>
Level IV <input type="checkbox"/>	Other: <input type="checkbox"/>
Deliverables: EDD <input type="checkbox"/>	ADAPT <input type="checkbox"/>

Project Name:	RDX Federal 17-354	Turn Around	
Project Number:	034819046	Routine	<input type="checkbox"/>
Project Location:	Rural Eddy County	Rush:	5 DAY
Sampler's Name:	Anna Byers	Due Date:	
PO #:	28P-5649	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature (°C):	1.4	Thermometer ID		
Received In tact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	T-NM-003	
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Total Containers:	-0.2	
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
F501	S	11/24/19	1520	4'	1	X	X	TPH (EPA 8015)	MeOH: Me
F502	S	11/24/19	1505	4'	1	X	X	BTEX (EPA 8021)	None: NO
						X	X	Chloride (EPA 300.0)	HNO3: HN
									H2SO4: H2
									HCL: HL
									NaOH: Na
									Zn Acetate+ NaOH: Zn
									TAT starts the day received by the lab, if received by 4:00pm
									Sample Comments

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 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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 \$75.00 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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Chris McKisson	11/24/19 1500	Chris McKisson	Chris McKisson	11/22/19 9:12
		11/22/19 9:05			

Inter-Office Shipment

IOS Number : **52994**

Date/Time: 11.22.2019

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
644213-001	S	FS01	11.21.2019 15:00	SW8015MOD_NM	TPH by SW8015 Mod	11.29.2019	12.05.2019	JKR	GRO-DRO PHCC10C28	
644213-001	S	FS01	11.21.2019 15:00	SW8021B	BTEX by EPA 8021B	11.29.2019	12.05.2019	JKR	BZ BZME EBZ XYLENE	
644213-001	S	FS01	11.21.2019 15:00	E300_CL	Chloride by EPA 300	11.29.2019	05.19.2020	JKR	CL	
644213-002	S	FS02	11.21.2019 15:05	SW8021B	BTEX by EPA 8021B	11.29.2019	12.05.2019	JKR	BZ BZME EBZ XYLENE	
644213-002	S	FS02	11.21.2019 15:05	E300_CL	Chloride by EPA 300	11.29.2019	05.19.2020	JKR	CL	
644213-002	S	FS02	11.21.2019 15:05	SW8015MOD_NM	TPH by SW8015 Mod	11.29.2019	12.05.2019	JKR	GRO-DRO PHCC10C28	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 11.22.2019

Received By:



Jessica Kramer

Date Received: 11.25.2019

Cooler Temperature: 1.2



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 52994

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 11.22.2019 12.19 PM

Received By: Jessica Kramer

Date Received: 11.25.2019 08.00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jessica Kramer

Date: 11.25.2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 11/22/2019 09:13:00 AM

Work Order #: 644213

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)?	1.5
#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)?	Yes Subbed to Midland.
#18 Water VOC samples have zero headspace?	N/A

*** 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: 11/22/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/23/2019

Analytical Report 644603

for
LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Federal 17-35H

034819046

02-DEC-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



02-DEC-19

Project Manager: **Chris McKisson**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **644603**
RDX Federal 17-35H
Project Address: Rural Eddy County

Chris McKisson:

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 XENCO Report Number(s) 644603. 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 XENCO Laboratories. 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. 644603 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 644603****LT Environmental, Inc., Arvada, CO**

RDX Federal 17-35H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH04	S	11-26-19 12:15	0.5 ft	644603-001
PH04A	S	11-26-19 12:25	4 ft	644603-002
PH05	S	11-26-19 12:35	0.5 ft	644603-003
PH05A	S	11-26-19 13:00	4 ft	644603-004
PH06	S	11-26-19 14:25	0.5 ft	644603-005
PH06A	S	11-26-19 14:35	4 ft	644603-006
PH07	S	11-26-19 14:45	0.5 ft	644603-007
PH07A	S	11-26-19 15:10	4 ft	644603-008
PH08	S	11-26-19 15:20	0.5 ft	644603-009
PH08A	S	11-26-19 15:30	4 ft	644603-010
PH09	S	11-26-19 15:40	0.5 ft	644603-011
PH09A	S	11-26-19 15:50	4 ft	644603-012

**CASE NARRATIVE***Client Name: LT Environmental, Inc.**Project Name: RDX Federal 17-35H*

Project ID: 034819046
Work Order Number(s): 644603

Report Date: 02-DEC-19
Date Received: 11/27/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109010 Chloride by EPA 300

Lab Sample ID 644603-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 644603-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

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

Batch: LBA-3109024 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 644603-005,644603-012,644603-009.

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 644603-012,644603-009.

Batch: LBA-3109032 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 644603

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 17-35H

Project Id: 034819046
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-27-19 09:10 am

Report Date: 02-DEC-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644603-001	644603-002	644603-003	644603-004	644603-005	644603-006
	<i>Field Id:</i>	PH04	PH04A	PH05	PH05A	PH06	PH06A
	<i>Depth:</i>	0.5- ft	4- ft	0.5- ft	4- ft	0.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-26-19 12:15	Nov-26-19 12:25	Nov-26-19 12:35	Nov-26-19 13:00	Nov-26-19 14:25	Nov-26-19 14:35
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11
	<i>Analyzed:</i>	Nov-27-19 12:51	Nov-27-19 13:10	Nov-27-19 13:30	Nov-27-19 13:49	Nov-27-19 14:08	Nov-27-19 14:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
m,p-Xylenes		<0.00403 0.00403	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00398 0.00398	<0.00403 0.00403
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
Xylenes, Total		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11
	<i>Analyzed:</i>	Nov-27-19 12:11	Nov-27-19 12:28	Nov-27-19 12:33	Nov-27-19 12:39	Nov-27-19 12:44	Nov-27-19 13:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		186 99.8	13.6 D 10.0	36.3 10.1	11.5 10.1	<10.0 10.0	73.6 D 9.94
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00
	<i>Analyzed:</i>	Nov-27-19 11:03	Nov-27-19 11:24	Nov-28-19 07:53	Nov-27-19 11:44	Nov-27-19 12:05	Nov-28-19 08:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Diesel Range Organics (DRO)		<50.3 50.3	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Total GRO-DRO		<50.3 50.3	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Total TPH		<50.3 50.3	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 644603

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 17-35H

Project Id: 034819046
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-27-19 09:10 am

Report Date: 02-DEC-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644603-007	644603-008	644603-009	644603-010	644603-011	644603-012
	<i>Field Id:</i>	PH07	PH07A	PH08	PH08A	PH09	PH09A
	<i>Depth:</i>	0.5- ft	4- ft	0.5- ft	4- ft	0.5- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-26-19 14:45	Nov-26-19 15:10	Nov-26-19 15:20	Nov-26-19 15:30	Nov-26-19 15:40	Nov-26-19 15:50
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11
	<i>Analyzed:</i>	Nov-27-19 14:46	Nov-27-19 15:05	Nov-27-19 15:24	Nov-27-19 15:43	Nov-27-19 17:43	Nov-27-19 18:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
m,p-Xylenes		<0.00404 0.00404	<0.00404 0.00404	<0.00401 0.00401	<0.00398 0.00398	<0.00394 0.00394	<0.00393 0.00393
o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
Xylenes, Total		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
Total BTEX		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00197 0.00197	<0.00196 0.00196
Chloride by EPA 300	<i>Extracted:</i>	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11
	<i>Analyzed:</i>	Nov-27-19 13:07	Nov-27-19 13:12	Nov-27-19 13:18	Nov-27-19 13:23	Nov-27-19 13:29	Nov-27-19 13:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<9.82 9.82	17.3 9.94	14.0 9.98	54.3 10.0	50.6 50.3	73.1 D 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00
	<i>Analyzed:</i>	Nov-27-19 12:25	Nov-27-19 12:25	Nov-27-19 12:45	Nov-27-19 12:45	Nov-27-19 13:05	Nov-27-19 13:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Diesel Range Organics (DRO)		<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Total GRO-DRO		<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8
Total TPH		<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.8 49.8	<49.8 49.8

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 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH04** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-001 Date Collected: 11.26.19 12.15 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	186	99.8	mg/kg	11.27.19 12.11		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.27.19 11.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.27.19 11.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.27.19 11.03	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.27.19 11.03	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.27.19 11.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	11.27.19 11.03	
o-Terphenyl	84-15-1	133	%	70-135	11.27.19 11.03	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH04**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-001

Date Collected: 11.26.19 12.15

Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.27.19 12.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 12.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.27.19 12.51		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.27.19 12.51		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH04A** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-002 Date Collected: 11.26.19 12.25 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	10.0	mg/kg	11.30.19 23.31	D	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.27.19 11.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.27.19 11.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.27.19 11.24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.27.19 11.24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.27.19 11.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	11.27.19 11.24	
o-Terphenyl	84-15-1	128	%	70-135	11.27.19 11.24	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH04A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-002

Date Collected: 11.26.19 12.25

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.27.19 13.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.27.19 13.10	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		111	%	70-130	11.27.19 13.10	
1,4-Difluorobenzene	540-36-3		98	%	70-130	11.27.19 13.10	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH05** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-003 Date Collected: 11.26.19 12.35 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.3	10.1	mg/kg	11.27.19 12.33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.28.19 07.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.28.19 07.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.28.19 07.53	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.28.19 07.53	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.28.19 07.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.28.19 07.53	
o-Terphenyl	84-15-1	121	%	70-135	11.28.19 07.53	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH05**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-003

Date Collected: 11.26.19 12.35

Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.27.19 13.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.27.19 13.30	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		115	%	70-130	11.27.19 13.30	
1,4-Difluorobenzene	540-36-3		100	%	70-130	11.27.19 13.30	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH05A** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-004 Date Collected: 11.26.19 13.00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.5	10.1	mg/kg	11.27.19 12.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.27.19 11.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.27.19 11.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.27.19 11.44	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.27.19 11.44	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.27.19 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	11.27.19 11.44	
o-Terphenyl	84-15-1	91	%	70-135	11.27.19 11.44	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH05A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-004

Date Collected: 11.26.19 13.00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.27.19 13.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.27.19 13.49	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		116	%	70-130	11.27.19 13.49	
1,4-Difluorobenzene	540-36-3		97	%	70-130	11.27.19 13.49	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH06** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-005 Date Collected: 11.26.19 14.25 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	11.27.19 12.44	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.27.19 12.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.27.19 12.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.27.19 12.05	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.27.19 12.05	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.27.19 12.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	11.27.19 12.05	**
o-Terphenyl	84-15-1	135	%	70-135	11.27.19 12.05	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH06** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-005 Date Collected: 11.26.19 14.25 Sample Depth: 0.5 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 10.11 Basis: Wet Weight
 Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.27.19 14.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.27.19 14.08	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.27.19 14.08		
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.27.19 14.08		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH06A** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-006 Date Collected: 11.26.19 14.35 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.6	9.94	mg/kg	12.01.19 10.45	D	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.28.19 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.28.19 08.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.28.19 08.13	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.28.19 08.13	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.28.19 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.28.19 08.13	
o-Terphenyl	84-15-1	112	%	70-135	11.28.19 08.13	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH06A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-006

Date Collected: 11.26.19 14.35

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.27.19 14.27	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 14.27	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		90	%	70-130	11.27.19 14.27	
1,4-Difluorobenzene	540-36-3		81	%	70-130	11.27.19 14.27	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH07** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-007 Date Collected: 11.26.19 14.45 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.82	9.82	mg/kg	11.27.19 13.07	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.27.19 12.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.27.19 12.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.27.19 12.25	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.27.19 12.25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.27.19 12.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.27.19 12.25	
o-Terphenyl	84-15-1	108	%	70-135	11.27.19 12.25	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH07** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-007 Date Collected: 11.26.19 14.45 Sample Depth: 0.5 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 10.11 Basis: Wet Weight
 Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.27.19 14.46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 14.46	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.27.19 14.46		
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.27.19 14.46		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH07A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-008

Date Collected: 11.26.19 15.10

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 11.11

Basis: Wet Weight

Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.3	9.94	mg/kg	11.27.19 13.12		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 11.27.19 11.00

Basis: Wet Weight

Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.27.19 12.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.27.19 12.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.27.19 12.25	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.27.19 12.25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.27.19 12.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.27.19 12.25	
o-Terphenyl	84-15-1	131	%	70-135	11.27.19 12.25	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH07A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-008

Date Collected: 11.26.19 15.10

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.27.19 15.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 15.05	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.27.19 15.05		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.27.19 15.05		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH08** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-009 Date Collected: 11.26.19 15.20 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.0	9.98	mg/kg	11.27.19 13.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.27.19 12.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.27.19 12.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.27.19 12.45	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.27.19 12.45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.27.19 12.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	138	%	70-135	11.27.19 12.45	**
o-Terphenyl	84-15-1	138	%	70-135	11.27.19 12.45	**



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH08** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-009 Date Collected: 11.26.19 15.20 Sample Depth: 0.5 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 10.11 Basis: Wet Weight
 Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.27.19 15.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.27.19 15.24	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.27.19 15.24		
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.27.19 15.24		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH08A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-010

Date Collected: 11.26.19 15.30

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 11.11

Basis: Wet Weight

Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.3	10.0	mg/kg	11.27.19 13.23		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 11.27.19 11.00

Basis: Wet Weight

Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.27.19 12.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.27.19 12.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.27.19 12.45	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.27.19 12.45	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.27.19 12.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.27.19 12.45	
o-Terphenyl	84-15-1	128	%	70-135	11.27.19 12.45	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH08A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-010

Date Collected: 11.26.19 15.30

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.27.19 15.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.27.19 15.43	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.27.19 15.43		
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.27.19 15.43		



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH09** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-011 Date Collected: 11.26.19 15.40 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.6	50.3	mg/kg	11.27.19 13.29		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.27.19 13.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.27.19 13.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.27.19 13.05	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.27.19 13.05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.27.19 13.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.27.19 13.05	
o-Terphenyl	84-15-1	128	%	70-135	11.27.19 13.05	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH09**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-011

Date Collected: 11.26.19 15.40

Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	11.27.19 17.43	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
Xylenes, Total	1330-20-7	<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
Total BTEX		<0.00197	0.00197	mg/kg	11.27.19 17.43	U	1
% Recovery							
Surrogate	Cas Number		% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		106	%	70-130	11.27.19 17.43	
1,4-Difluorobenzene	540-36-3		89	%	70-130	11.27.19 17.43	



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH09A** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644603-012 Date Collected: 11.26.19 15.50 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.1	9.92	mg/kg	12.01.19 11.08	D	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.27.19 13.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.27.19 13.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.27.19 13.25	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.27.19 13.25	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.27.19 13.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	138	%	70-135	11.27.19 13.25	**
o-Terphenyl	84-15-1	140	%	70-135	11.27.19 13.25	**



Certificate of Analytical Results 644603

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **PH09A**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644603-012

Date Collected: 11.26.19 15.50

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
m,p-Xylenes	179601-23-1	<0.00393	0.00393	mg/kg	11.27.19 18.02	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
Xylenes, Total	1330-20-7	<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
Total BTEX		<0.00196	0.00196	mg/kg	11.27.19 18.02	U	1
% Recovery							
Surrogate	Cas Number		% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		108	%	70-130	11.27.19 18.02	
1,4-Difluorobenzene	540-36-3		102	%	70-130	11.27.19 18.02	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 644603

LT Environmental, Inc.

RDX Federal 17-35H

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

MB Sample Id: 7691326-1-BLK

Matrix: Solid

LCS Sample Id: 7691326-1-BKS

Prep Method: E300P

Date Prep: 11.27.19

LCSD Sample Id: 7691326-1-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	256	102	260	104	90-110	2	20	mg/kg	11.27.19 11:59	

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

Parent Sample Id: 644603-001

Matrix: Soil

MS Sample Id: 644603-001 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	186	199	365	90	363	89	90-110	1	20	mg/kg	11.27.19 12:16	X

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

Parent Sample Id: 644603-011

Matrix: Soil

MS Sample Id: 644603-011 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644603-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	50.6	202	237	92	234	92	90-110	1	20	mg/kg	11.27.19 13:35	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

MB Sample Id: 7691369-1-BLK

Matrix: Solid

LCS Sample Id: 7691369-1-BKS

Prep Method: SW8015P

Date Prep: 11.27.19

LCSD Sample Id: 7691369-1-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	1050	105	905	91	70-135	15	35	mg/kg	11.27.19 10:43	
Diesel Range Organics (DRO)	<50.0	1000	1200	120	1110	111	70-135	8	35	mg/kg	11.27.19 10:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		133		127		70-135	%	11.27.19 10:43
o-Terphenyl	112		134		130		70-135	%	11.27.19 10:43

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

Matrix: Solid
MB Sample Id: 7691369-1-BLK

Prep Method: SW8015P

Date Prep: 11.27.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.27.19 10:24	

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 644603

LT Environmental, Inc.

RDX Federal 17-35H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

Parent Sample Id: 644603-001

Matrix: Soil

MS Sample Id: 644603-001 S

Prep Method: SW8015P

Date Prep: 11.27.19

MSD Sample Id: 644603-001 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)	<49.9	998	905	91	1000	100	70-135	10	35	mg/kg	11.27.19 11:03	
Diesel Range Organics (DRO)	<49.9	998	1110	111	1150	115	70-135	4	35	mg/kg	11.27.19 11:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		132		70-135	%	11.27.19 11:03
o-Terphenyl	127		131		70-135	%	11.27.19 11:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109032

MB Sample Id: 7691377-1-BLK

Matrix: Solid

LCS Sample Id: 7691377-1-BKS

Prep Method: SW5030B

Date Prep: 11.27.19

LCSD Sample Id: 7691377-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0900	90	0.0916	92	70-130	2	35	mg/kg	11.27.19 11:09	
Toluene	<0.00200	0.100	0.0920	92	0.0930	93	70-130	1	35	mg/kg	11.27.19 11:09	
Ethylbenzene	<0.00200	0.100	0.0906	91	0.0918	92	71-129	1	35	mg/kg	11.27.19 11:09	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.197	99	70-135	2	35	mg/kg	11.27.19 11:09	
o-Xylene	<0.00200	0.100	0.0987	99	0.100	100	71-133	1	35	mg/kg	11.27.19 11:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		102		70-130	%	11.27.19 11:09
4-Bromofluorobenzene	101		108		111		70-130	%	11.27.19 11:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109032

Parent Sample Id: 644603-001

Matrix: Soil

MS Sample Id: 644603-001 S

Prep Method: SW5030B

Date Prep: 11.27.19

MSD Sample Id: 644603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0925	92	0.102	101	70-130	10	35	mg/kg	11.27.19 11:47	
Toluene	<0.00202	0.101	0.0934	92	0.103	102	70-130	10	35	mg/kg	11.27.19 11:47	
Ethylbenzene	<0.00202	0.101	0.0918	91	0.101	100	71-129	10	35	mg/kg	11.27.19 11:47	
m,p-Xylenes	<0.00403	0.202	0.197	98	0.215	106	70-135	9	35	mg/kg	11.27.19 11:47	
o-Xylene	<0.00202	0.101	0.101	100	0.110	109	71-133	9	35	mg/kg	11.27.19 11:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		105		70-130	%	11.27.19 11:47
4-Bromofluorobenzene	109		113		70-130	%	11.27.19 11:47

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

Work Order No: 1441003

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
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com Page 1 of 2

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com and abays@ltenv.com
Project Name:	RDX Federal 17-554	Turn Around	
Project Number:	034819046	Routine	<input type="checkbox"/>
Project Location:	Rural Eddy County	Rush:	24 Hr
Sampler's Name:	Anna Byers	Due Date:	
PO #:	220-5649	Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature (°C):	0.6	Thermometer ID			
Received In tact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:	12		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
SPD PH04		S	11/26/19	12:15	0.5'	1		TPH (EPA 8015)	MeOH: Me
PH04A		S		12:25	4'	1		BTEX (EPA 8021)	None: NO
PH05		S		12:35	0.5'	1		Chloride (EPA 300.0)	HNO3: HN
PH05A		S		1:30	4'	1			H2SO4: H2
PH06		S		14:25	0.5'	1			HCL: HL
PH06A		S		14:35	4'	1			NaOH: Na
PH07		S		14:45	0.5'	1			Zn Acetate+ NaOH: Zn
PH07A		S		15:10	4'	1			TAT starts the day received by the lab, if received by 4:00pm
PH08		S		15:20	0.5'	1			
PH08A		S		15:30	4'	1			

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed: 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

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 \$75.00 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) Anna Byers Received by: (Signature) Chris McKisson Date/Time 11/26/19 9:10

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

Revised Date 02/28/19 Rev. 2019.1



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
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Chain of Custody

Work Order No:

0441003

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	cmckisson@ltenv.com dabyer@ltenv.com

ANALYSIS REQUEST

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project: ☐
Reporting Level: I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADAPT ☐ Other: ☐

Work Order Comments

Page 2 of 2

Project Name:	RDX Federal 17-35H	Turn Around	
Project Number:	034 819 046	Routine	<input type="checkbox"/>
Project Location:	Bural Eddy County	Rush:	24 HR
Sampler's Name:	Anna Byers	Due Date:	
PO #:	244-56490	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):				Thermometer ID		
Received Intact:	Yes	No	Correction Factor:			
Cooler Custody Seals:	Yes	No	Total Containers:			
Sample Custody Seals:	Yes	No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
PH09		S	11/26/19	1540	0.5'	1			MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn
PH09A		S	11/26/19	1550	4'	1			TAT starts the day received by the lab, if received by 4:00pm
									Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb 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 Sp As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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 \$75.00 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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Chris McKisson	11/26/19 9:10			



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 11/27/2019 09:10:00 AM

Work Order #: 644603

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)?	.6
#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

*** 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: 11/27/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/27/2019

Analytical Report 644605

for
LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Federal 17-35H

034819046

02-DEC-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



02-DEC-19

Project Manager: **Chris McKisson**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **644605**
RDX Federal 17-35H
Project Address: Rural Eddy County

Chris McKisson:

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 XENCO Report Number(s) 644605. 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 XENCO Laboratories. 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. 644605 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 XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 644605****LT Environmental, Inc., Arvada, CO**

RDX Federal 17-35H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	11-26-19 11:25	4 ft	644605-001
FS04	S	11-26-19 11:30	4 ft	644605-002
FS05	S	11-26-19 11:35	4 ft	644605-003
FS06	S	11-26-19 16:15	0.5 - 2 ft	644605-004
FS07	S	11-26-19 16:20	0.5 - 2 ft	644605-005
FS08	S	11-26-19 16:25	0.5 - 2 ft	644605-006
FS09	S	11-26-19 16:30	0.5 - 2 ft	644605-007
SW01	S	11-26-19 11:40	0.5 - 4 ft	644605-008
SW02	S	11-26-19 11:45	0.5 - 4 ft	644605-009
SW03	S	11-26-19 11:50	0.5 - 4 ft	644605-010
SW04	S	11-26-19 12:00	0.5 - 4 ft	644605-011

**CASE NARRATIVE***Client Name: LT Environmental, Inc.**Project Name: RDX Federal 17-35H*

Project ID: 034819046
Work Order Number(s): 644605

Report Date: 02-DEC-19
Date Received: 11/27/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109016 Chloride by EPA 300

Lab Sample ID 644608-006 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: 644605-007, -008, -009, -010, -011.

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

Batch: LBA-3109024 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 644605-002.

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 644605-002, 644605-007.

Batch: LBA-3109032 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3109033 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 644605

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 17-35H

Project Id: 034819046
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-27-19 09:10 am

Report Date: 02-DEC-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644605-001	644605-002	644605-003	644605-004	644605-005	644605-006
	<i>Field Id:</i>	FS03	FS04	FS05	FS06	FS07	FS08
	<i>Depth:</i>	4- ft	4- ft	4- ft	0.5-2 ft	0.5-2 ft	0.5-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-26-19 11:25	Nov-26-19 11:30	Nov-26-19 11:35	Nov-26-19 16:15	Nov-26-19 16:20	Nov-26-19 16:25
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 10:11
	<i>Analyzed:</i>	Nov-27-19 18:21	Nov-27-19 18:40	Nov-27-19 18:59	Nov-27-19 19:18	Nov-27-19 19:38	Nov-27-19 19:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
m,p-Xylenes		<0.00397 0.00397	<0.00399 0.00399	<0.00398 0.00398	<0.00395 0.00395	<0.00394 0.00394	<0.00403 0.00403
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
Xylenes, Total		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00197 0.00197	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11	Nov-27-19 11:11
	<i>Analyzed:</i>	Nov-27-19 13:57	Nov-27-19 14:14	Nov-27-19 14:19	Nov-27-19 14:25	Nov-27-19 14:30	Nov-27-19 14:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2100 200	894 100	1160 201	15800 501	9250 502	5600 200
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 11:00
	<i>Analyzed:</i>	Nov-27-19 13:25	Nov-27-19 13:45	Nov-27-19 13:45	Nov-27-19 14:05	Nov-27-19 14:05	Nov-27-19 14:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 644605

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 17-35H

Project Id: 034819046
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Nov-27-19 09:10 am

Report Date: 02-DEC-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644605-007	644605-008	644605-009	644605-010	644605-011	
	<i>Field Id:</i>	FS09	SW01	SW02	SW03	SW04	
	<i>Depth:</i>	0.5-2 ft	0.5-4 ft	0.5-4 ft	0.5-4 ft	0.5-4 ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Nov-26-19 16:30	Nov-26-19 11:40	Nov-26-19 11:45	Nov-26-19 11:50	Nov-26-19 12:00	
BTEX by EPA 8021B	<i>Extracted:</i>	Nov-27-19 10:11	Nov-27-19 10:11	Nov-27-19 14:11	Nov-27-19 14:11	Nov-27-19 14:11	
	<i>Analyzed:</i>	Nov-27-19 20:16	Nov-27-19 20:35	Nov-28-19 00:00	Nov-27-19 23:40	Nov-28-19 00:19	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
m,p-Xylenes		<0.00402 0.00402	<0.00403 0.00403	<0.00403 0.00403	<0.00401 0.00401	<0.00402 0.00402	
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
Xylenes, Total		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	
Chloride by EPA 300	<i>Extracted:</i>	Nov-27-19 13:11	Nov-27-19 13:11	Nov-27-19 13:11	Nov-27-19 13:11	Nov-27-19 13:11	
	<i>Analyzed:</i>	Nov-27-19 15:09	Nov-27-19 15:26	Nov-27-19 15:32	Nov-27-19 15:43	Nov-27-19 15:49	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		7540 499	1930 99.4	1040 50.4	103 10.1	1080 100	
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-27-19 11:00	Nov-27-19 11:00	Nov-27-19 13:00	Nov-27-19 13:00	Nov-27-19 13:00	
	<i>Analyzed:</i>	Nov-27-19 14:25	Nov-27-19 14:45	Nov-27-19 15:25	Nov-27-19 16:04	Nov-27-19 16:04	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.1 50.1	<49.9 49.9	
Diesel Range Organics (DRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.1 50.1	<49.9 49.9	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.1 50.1	<49.9 49.9	
Total GRO-DRO		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.1 50.1	<49.9 49.9	
Total TPH		<50.0 50.0	<50.2 50.2	<50.0 50.0	<50.1 50.1	<49.9 49.9	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS03** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-001 Date Collected: 11.26.19 11.25 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2100	200	mg/kg	11.27.19 13.57		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 13.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 13.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 13.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 13.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 13.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	11.27.19 13.25	
o-Terphenyl	84-15-1	126	%	70-135	11.27.19 13.25	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS03**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-001

Date Collected: 11.26.19 11.25

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.27.19 18.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.27.19 18.21	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	11.27.19 18.21		
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.27.19 18.21		



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS04** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-002 Date Collected: 11.26.19 11.30 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	894	100	mg/kg	11.27.19 14.14		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 13.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 13.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 13.45	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 13.45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 13.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	143	%	70-135	11.27.19 13.45	**
o-Terphenyl	84-15-1	146	%	70-135	11.27.19 13.45	**



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS04**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-002

Date Collected: 11.26.19 11.30

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.27.19 18.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.27.19 18.40	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		103	%	70-130	11.27.19 18.40	
4-Bromofluorobenzene	460-00-4		113	%	70-130	11.27.19 18.40	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS05** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-003 Date Collected: 11.26.19 11.35 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1160	201	mg/kg	11.27.19 14.19		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.27.19 13.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.27.19 13.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.27.19 13.45	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.27.19 13.45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.27.19 13.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	11.27.19 13.45	
o-Terphenyl	84-15-1	129	%	70-135	11.27.19 13.45	



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LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS05**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-003

Date Collected: 11.26.19 11.35

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.27.19 18.59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.27.19 18.59	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	11.27.19 18.59		
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.27.19 18.59		



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS06** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-004 Date Collected: 11.26.19 16.15 Sample Depth: 0.5 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15800	501	mg/kg	11.27.19 14.25		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.27.19 14.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.27.19 14.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.27.19 14.05	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.27.19 14.05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.27.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.27.19 14.05	
o-Terphenyl	84-15-1	123	%	70-135	11.27.19 14.05	



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LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: FS06	Matrix: Soil	Date Received: 11.27.19 09.10
Lab Sample Id: 644605-004	Date Collected: 11.26.19 16.15	Sample Depth: 0.5 - 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 11.27.19 10.11	Basis: Wet Weight
Seq Number: 3109032		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	11.27.19 19.18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.27.19 19.18	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		114	%	70-130	11.27.19 19.18	
1,4-Difluorobenzene	540-36-3		106	%	70-130	11.27.19 19.18	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS07** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-005 Date Collected: 11.26.19 16.20 Sample Depth: 0.5 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9250	502	mg/kg	11.27.19 14.30		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 14.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 14.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 14.05	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 14.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	11.27.19 14.05	
o-Terphenyl	84-15-1	129	%	70-135	11.27.19 14.05	



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LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS07** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-005 Date Collected: 11.26.19 16.20 Sample Depth: 0.5 - 2 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 10.11 Basis: Wet Weight
 Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	11.27.19 19.38	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
Xylenes, Total	1330-20-7	<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
Total BTEX		<0.00197	0.00197	mg/kg	11.27.19 19.38	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.27.19 19.38		
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.27.19 19.38		



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS08** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-006 Date Collected: 11.26.19 16.25 Sample Depth: 0.5 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 11.11 Basis: Wet Weight
 Seq Number: 3109010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5600	200	mg/kg	11.27.19 14.36		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 14.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	11.27.19 14.25	
o-Terphenyl	84-15-1	129	%	70-135	11.27.19 14.25	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS08**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-006

Date Collected: 11.26.19 16.25

Sample Depth: 0.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.27.19 19.57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 19.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.27.19 19.57		
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.27.19 19.57		



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS09** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-007 Date Collected: 11.26.19 16.30 Sample Depth: 0.5 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 13.11 Basis: Wet Weight
 Seq Number: 3109016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7540	499	mg/kg	11.27.19 15.09		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 14.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 14.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	11.27.19 14.25	
o-Terphenyl	84-15-1	141	%	70-135	11.27.19 14.25	**



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **FS09**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-007

Date Collected: 11.26.19 16.30

Sample Depth: 0.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.27.19 20.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.27.19 20.16	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		106	%	70-130	11.27.19 20.16	
4-Bromofluorobenzene	460-00-4		113	%	70-130	11.27.19 20.16	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW01** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-008 Date Collected: 11.26.19 11.40 Sample Depth: 0.5 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 13.11 Basis: Wet Weight
 Seq Number: 3109016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1930	99.4	mg/kg	11.27.19 15.26		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 11.00 Basis: Wet Weight
 Seq Number: 3109024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.27.19 14.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.27.19 14.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.27.19 14.45	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.27.19 14.45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.27.19 14.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.27.19 14.45	
o-Terphenyl	84-15-1	124	%	70-135	11.27.19 14.45	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW01**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-008

Date Collected: 11.26.19 11.40

Sample Depth: 0.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 10.11

Basis: Wet Weight

Seq Number: 3109032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.27.19 20.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.27.19 20.35	U	1
% Recovery							
Surrogate	Cas Number		% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		105	%	70-130	11.27.19 20.35	
4-Bromofluorobenzene	460-00-4		114	%	70-130	11.27.19 20.35	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW02** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-009 Date Collected: 11.26.19 11.45 Sample Depth: 0.5 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 13.11 Basis: Wet Weight
 Seq Number: 3109016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1040	50.4	mg/kg	11.27.19 15.32		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 13.00 Basis: Wet Weight
 Seq Number: 3109042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.27.19 15.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.27.19 15.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.27.19 15.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.27.19 15.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.27.19 15.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	11.27.19 15.25	
o-Terphenyl	84-15-1	123	%	70-135	11.27.19 15.25	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW02** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-009 Date Collected: 11.26.19 11.45 Sample Depth: 0.5 - 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 14.11 Basis: Wet Weight
 Seq Number: 3109033

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.28.19 00.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.28.19 00.00	U	1
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	11.28.19 00.00		
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.28.19 00.00		



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW03**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-010

Date Collected: 11.26.19 11.50

Sample Depth: 0.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 13.11

Basis: Wet Weight

Seq Number: 3109016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	103	10.1	mg/kg	11.27.19 15.43		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 11.27.19 13.00

Basis: Wet Weight

Seq Number: 3109042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.27.19 16.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.27.19 16.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.27.19 16.04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.27.19 16.04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.27.19 16.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	11.27.19 16.04	
o-Terphenyl	84-15-1	127	%	70-135	11.27.19 16.04	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW03**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-010

Date Collected: 11.26.19 11.50

Sample Depth: 0.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 14.11

Basis: Wet Weight

Seq Number: 3109033

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.27.19 23.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.27.19 23.40	U	1
% Recovery							
Surrogate	Cas Number		% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		97	%	70-130	11.27.19 23.40	
4-Bromofluorobenzene	460-00-4		105	%	70-130	11.27.19 23.40	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW04** Matrix: Soil Date Received: 11.27.19 09.10
 Lab Sample Id: 644605-011 Date Collected: 11.26.19 12.00 Sample Depth: 0.5 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 11.27.19 13.11 Basis: Wet Weight
 Seq Number: 3109016

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1080	100	mg/kg	11.27.19 15.49		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 11.27.19 13.00 Basis: Wet Weight
 Seq Number: 3109042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.27.19 16.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.27.19 16.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.27.19 16.04	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.27.19 16.04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.27.19 16.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.27.19 16.04	
o-Terphenyl	84-15-1	126	%	70-135	11.27.19 16.04	



Certificate of Analytical Results 644605

LT Environmental, Inc., Arvada, CO

RDX Federal 17-35H

Sample Id: **SW04**

Matrix: Soil

Date Received: 11.27.19 09.10

Lab Sample Id: 644605-011

Date Collected: 11.26.19 12.00

Sample Depth: 0.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 11.27.19 14.11

Basis: Wet Weight

Seq Number: 3109033

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.28.19 00.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.28.19 00.19	U	1
% Recovery							
Surrogate	Cas Number		% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		104	%	70-130	11.28.19 00.19	
4-Bromofluorobenzene	460-00-4		115	%	70-130	11.28.19 00.19	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Sample Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 644605

LT Environmental, Inc.
RDX Federal 17-35H

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

MB Sample Id: 7691326-1-BLK

Matrix: Solid

LCS Sample Id: 7691326-1-BKS

Prep Method: E300P

Date Prep: 11.27.19

LCSD Sample Id: 7691326-1-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	256	102	260	104	90-110	2	20	mg/kg	11.27.19 11:59	

Analytical Method: Chloride by EPA 300

Seq Number: 3109016

MB Sample Id: 7691384-1-BLK

Matrix: Solid

LCS Sample Id: 7691384-1-BKS

Prep Method: E300P

Date Prep: 11.27.19

LCSD Sample Id: 7691384-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.72	250	260	104	264	106	90-110	2	20	mg/kg	11.27.19 14:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

Parent Sample Id: 644603-001

Matrix: Soil

MS Sample Id: 644603-001 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	186	199	365	90	363	89	90-110	1	20	mg/kg	11.27.19 12:16	X

Analytical Method: Chloride by EPA 300

Seq Number: 3109010

Parent Sample Id: 644603-011

Matrix: Soil

MS Sample Id: 644603-011 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644603-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	50.6	202	237	92	234	92	90-110	1	20	mg/kg	11.27.19 13:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3109016

Parent Sample Id: 644605-007

Matrix: Soil

MS Sample Id: 644605-007 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644605-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7540	200	7700	80	7690	76	90-110	0	20	mg/kg	11.27.19 15:15	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 644605

LT Environmental, Inc.
RDX Federal 17-35H

Analytical Method: Chloride by EPA 300

Seq Number: 3109016

Parent Sample Id: 644608-006

Matrix: Soil

MS Sample Id: 644608-006 S

Prep Method: E300P

Date Prep: 11.27.19

MSD Sample Id: 644608-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2830	200	3040	105	3030	101	90-110	0	20	mg/kg	11.27.19 16:41	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

MB Sample Id: 7691369-1-BLK

Matrix: Solid

LCS Sample Id: 7691369-1-BKS

Prep Method: SW8015P

Date Prep: 11.27.19

LCSD Sample Id: 7691369-1-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	1050	105	905	91	70-135	15	35	mg/kg	11.27.19 10:43	
Diesel Range Organics (DRO)	<50.0	1000	1200	120	1110	111	70-135	8	35	mg/kg	11.27.19 10:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		133		127		70-135	%	11.27.19 10:43
o-Terphenyl	112		134		130		70-135	%	11.27.19 10:43

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109042

MB Sample Id: 7691370-1-BLK

Matrix: Solid

LCS Sample Id: 7691370-1-BKS

Prep Method: SW8015P

Date Prep: 11.27.19

LCSD Sample Id: 7691370-1-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	897	90	1120	112	70-135	22	35	mg/kg	11.27.19 15:05	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1290	129	70-135	15	35	mg/kg	11.27.19 15:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		122		134		70-135	%	11.27.19 15:05
o-Terphenyl	114		129		126		70-135	%	11.27.19 15:05

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

Matrix: Solid
MB Sample Id: 7691369-1-BLK

Prep Method: SW8015P

Date Prep: 11.27.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.27.19 10:24	

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 644605

LT Environmental, Inc.
RDX Federal 17-35H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109042

Matrix: Solid

Prep Method: SW8015P

Date Prep: 11.27.19

MB Sample Id: 7691370-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.27.19 15:05	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109024

Matrix: Soil

Prep Method: SW8015P

Date Prep: 11.27.19

Parent Sample Id: 644603-001

MS Sample Id: 644603-001 S

MSD Sample Id: 644603-001 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)	<49.9	998	905	91	1000	100	70-135	10	35	mg/kg	11.27.19 11:03	
Diesel Range Organics (DRO)	<49.9	998	1110	111	1150	115	70-135	4	35	mg/kg	11.27.19 11:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		132		70-135	%	11.27.19 11:03
o-Terphenyl	127		131		70-135	%	11.27.19 11:03

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109042

Matrix: Soil

Prep Method: SW8015P

Date Prep: 11.27.19

Parent Sample Id: 644605-009

MS Sample Id: 644605-009 S

MSD Sample Id: 644605-009 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)	<50.2	1000	1050	105	895	90	70-135	16	35	mg/kg	11.27.19 15:45	
Diesel Range Organics (DRO)	<50.2	1000	1080	108	1280	128	70-135	17	35	mg/kg	11.27.19 15:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		104		70-135	%	11.27.19 15:45
o-Terphenyl	90		124		70-135	%	11.27.19 15:45

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 644605

LT Environmental, Inc.
RDX Federal 17-35H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109032

Matrix: Solid

Prep Method: SW5030B

MB Sample Id: 7691377-1-BLK

LCS Sample Id: 7691377-1-BKS

Date Prep: 11.27.19

LCSD Sample Id: 7691377-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0900	90	0.0916	92	70-130	2	35	mg/kg	11.27.19 11:09	
Toluene	<0.00200	0.100	0.0920	92	0.0930	93	70-130	1	35	mg/kg	11.27.19 11:09	
Ethylbenzene	<0.00200	0.100	0.0906	91	0.0918	92	71-129	1	35	mg/kg	11.27.19 11:09	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.197	99	70-135	2	35	mg/kg	11.27.19 11:09	
o-Xylene	<0.00200	0.100	0.0987	99	0.100	100	71-133	1	35	mg/kg	11.27.19 11:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		102		70-130	%	11.27.19 11:09
4-Bromofluorobenzene	101		108		111		70-130	%	11.27.19 11:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109033

Matrix: Solid

Prep Method: SW5030B

MB Sample Id: 7691378-1-BLK

LCS Sample Id: 7691378-1-BKS

Date Prep: 11.27.19

LCSD Sample Id: 7691378-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0782	78	0.0900	90	70-130	14	35	mg/kg	11.27.19 21:58	
Toluene	<0.00200	0.100	0.0801	80	0.0920	92	70-130	14	35	mg/kg	11.27.19 21:58	
Ethylbenzene	<0.00200	0.100	0.0784	78	0.0902	90	71-129	14	35	mg/kg	11.27.19 21:58	
m,p-Xylenes	<0.00400	0.200	0.168	84	0.193	97	70-135	14	35	mg/kg	11.27.19 21:58	
o-Xylene	<0.00200	0.100	0.0869	87	0.0999	100	71-133	14	35	mg/kg	11.27.19 21:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		101		70-130	%	11.27.19 21:58
4-Bromofluorobenzene	104		107		109		70-130	%	11.27.19 21:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109032

Matrix: Soil

Prep Method: SW5030B

Parent Sample Id: 644603-001

MS Sample Id: 644603-001 S

Date Prep: 11.27.19

MSD Sample Id: 644603-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0925	92	0.102	101	70-130	10	35	mg/kg	11.27.19 11:47	
Toluene	<0.00202	0.101	0.0934	92	0.103	102	70-130	10	35	mg/kg	11.27.19 11:47	
Ethylbenzene	<0.00202	0.101	0.0918	91	0.101	100	71-129	10	35	mg/kg	11.27.19 11:47	
m,p-Xylenes	<0.00403	0.202	0.197	98	0.215	106	70-135	9	35	mg/kg	11.27.19 11:47	
o-Xylene	<0.00202	0.101	0.101	100	0.110	109	71-133	9	35	mg/kg	11.27.19 11:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		105		70-130	%	11.27.19 11:47
4-Bromofluorobenzene	109		113		70-130	%	11.27.19 11:47

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 644605

LT Environmental, Inc.

RDX Federal 17-35H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109033

Parent Sample Id: 644605-010

Matrix: Soil

MS Sample Id: 644605-010 S

Prep Method: SW5030B

Date Prep: 11.27.19

MSD Sample Id: 644605-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0836	84	0.0880	88	70-130	5	35	mg/kg	11.27.19 22:36	
Toluene	<0.00200	0.0998	0.0832	83	0.0856	86	70-130	3	35	mg/kg	11.27.19 22:36	
Ethylbenzene	<0.00200	0.0998	0.0810	81	0.0823	82	71-129	2	35	mg/kg	11.27.19 22:36	
m,p-Xylenes	<0.00399	0.200	0.173	87	0.175	87	70-135	1	35	mg/kg	11.27.19 22:36	
o-Xylene	<0.00200	0.0998	0.0898	90	0.0915	92	71-133	2	35	mg/kg	11.27.19 22:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	11.27.19 22:36
4-Bromofluorobenzene	115		114		70-130	%	11.27.19 22:36

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



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 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Chain of Custody

Work Order No: 164465

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	cmckisson@ltenv.com, labys@ltenv.com

Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:
Reporting Level: I <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	RDX Federal 17-35H	Turn Around	<input type="checkbox"/>
Project Number:	034819046	Routine	<input type="checkbox"/>
Project Location:	Rural Eddy County	Rush:	24 HR
Sampler's Name:	Anna Byers	Due Date:	
PO #:	280-5649	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature (°C):	0.0	Thermometer ID	1-N/A-007	
Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Total Containers:	1	
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes
FS03		S	11/20/19	11:25	4'	1	TPH (EPA 8015)	MeOH: Me
FS04		S		11:30	4'	1	BTEX (EPA 8021)	None: NO
FS05		S		11:35	4'	1	Chloride (EPA 800.0)	HNO3: HN
FS06		S		16:15	0.5-2'	1		H2SO4: H2
FS07		S		16:20	0.5-2'	1		HCL: HL
FS08		S		16:25	0.5-2'	1		NaOH: Na
FS09		S		16:30	0.5-2'	1		Zn Acetate+ NaOH: Zn
SW01		S		11:40	0.5-4'	1		
SW02		S		11:45	0.5-4'	1		
SW03		S		11:50	0.5-4'	1		

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 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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 \$75.00 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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers	Chris McKisson	11/20/19 11:10			

Revised Date 02/20/19 Rev: 2019.1



Chain of Custody

Work Order No: 444 605

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

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Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8900 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 2 of 2

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	cmckisson@ltenv.com d. abyers@ltenv.com

Project Name:	RDX Federal 14-35H	Turn Around	
Project Number:	034819046	Routine	<input type="checkbox"/>
Project Location:	Rural Eddy County	Rush:	24HR
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2EP-5649	Quote #:	

SAMPLE RECEIPT				ANALYSIS REQUEST			
Temperature (°C):	Temp Blank:	Yes	No	Wet Ice:	Yes	No	
Received intact:	Yes	No		Thermometer ID			
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:			
Sample Custody Seals:	Yes	No	N/A	Total Containers:			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 8000)
SW04		S	11/26/19	1200	0.5-4'	1	X	X	X

Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Pb 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		1631 / 245.1 / 7470 / 7471 : Hg	

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		11/26/19 9:10			



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 11/27/2019 09:10:00 AM

Work Order #: 644605

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)?	.6
#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

*** 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: 11/27/2019

Checklist reviewed by:

Jessica Kramer

Date: 11/27/2019

Sante Fe Main Office
Phone: (505) 476-3441

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

QUESTIONS

Action 433954

QUESTIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1928154373
Incident Name	NAB1928154373 RDX FEDERAL 17 #035H @ 30-015-43884
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-43884] RDX FEDERAL 17 #035H

Location of Release Source

Please answer all the questions in this group.

Site Name	RDX FEDERAL 17 #035H
Date Release Discovered	09/08/2019
Surface Owner	Federal

Incident Details

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure Valve Produced Water Released: 10 BBL Recovered: 4 BBL Lost: 6 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvni.com Date: 02/20/2025
--	---

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QUESTIONS, Page 3

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1000 (ft.) and ½ (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	15800
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	10/14/2024
On what date will (or did) the final sampling or liner inspection occur	10/29/2024
On what date will (or was) the remediation complete(d)	10/25/2024
What is the estimated surface area (in square feet) that will be reclaimed	6116
What is the estimated volume (in cubic yards) that will be reclaimed	1255
What is the estimated surface area (in square feet) that will be remediated	6116
What is the estimated volume (in cubic yards) that will be remediated	1255

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	Not answered.
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 02/20/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 6

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	395587
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/29/2024
What was the (estimated) number of samples that were to be gathered	20
What was the sampling surface area in square feet	3400

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	6116
What was the total volume (cubic yards) remediated	1255
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	6116
What was the total volume (in cubic yards) reclaimed	1255
Summarize any additional remediation activities not included by answers (above)	The excavation will be backfilled upon approval of this Closure Request Report and reseeded with the appropriate BLM seed mixture according to BLM guidelines.

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 02/20/2025
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QUESTIONS, Page 7

Action 433954

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 433954

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 433954
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAB1928154373 RDX FEDERAL 17 #035H, thank you. This Remediation Closure Report is approved.	3/4/2025