



June 20, 2024

**New Mexico Energy Mineral and Natural Resources Department**

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Closure Report Request Addendum  
RDX 17 Federal Com #020H  
Incident Numbers NAB1422341439 & NAB1706053151  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of WPX Energy Permian, LLC (WPX), has prepared this *Closure Report Request Addendum* (CRR) to document assessment, excavation, and soil sampling activities at the RDX Federal Com #020H (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following releases of fluids onto the well pad. Based on field observations, field screening activities, and soil sample laboratory analytical results, WPX is submitting this CRR, describing additional Site assessment and confirmation sampling activities that have occurred and requesting closure for Incident Numbers NAB1422341439 & NAB1706053151.

On November 30, 2023, Ensolum submitted a Closure Report Request (CRR) to the New Mexico Oil Conservation Division (NMOCD); however, the CRR was denied for the following reasons:

*SS02 not fully delineated. All areas not reasonably needed for production or subsequent drilling operations must be reclaimed to contain a minimum of four feet of non-waste earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene.*

This CRR addresses NMOCD's concerns regarding the delineation sample SS02 required to vertically define the release extent on-pad. This Site is still an active well pad and therefore excavation of the waste-containing soil will be completed during reclamation of the Site.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit A, Section 17, Township 26 South, Range 30 East, in Eddy County, New Mexico (32.0489464°, -103.8974533°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 28, 2014, an isolation valve (check valve) on the backup blender was thought to have been leaking. This equipment failure allowed frac fluid to backflow from the active blender to the backup blender and overflow into the secondary containment and beyond. Approximately 700 barrels (bbls) was released and 200 barrels (bbls) of frac fluid was recovered from the secondary containment and an additional 500 bbls was recovered from the well pad itself at the conclusion of pumping operations and

demobilization of frac equipment. RKI Exploration & Production, LLC (RKI), the previous owner, reported the release to the NMOCD and filed a Corrective Action Form C-141 (Form C-141) on August 05, 2014. Subsequently, NMOCD assigned Incident Number NAB1422341439 to the release.

On February 10, 2017, a hose on a discharge pump developed a hole due to constant vibration. This failure resulted in the release of approximately 400 bbls of produced water onto the caliche pad; 100 bbls was recovered with a vacuum truck. Some of the spilled fluids migrated to an area off-pad and impacted an area roughly 100 feet by 100 feet in size; the off-pad spill area is located on the north side of the caliche pad. The Incident Number associated with this release is NAB1706053151.

## **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of Form C-141 (see Appendix A), Site Assessment/Characterization. Potential Site receptors are identified in Figure 1.

The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-4068-POD1, with a depth to water measurement of greater than 125 feet below ground surface (bgs). The well is located 0.24 miles southeast of the Site and the most recent documented water level measurement was collected on May 12, 2017, indicating groundwater was not present in the boring and that groundwater is present at depths greater than 125 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 797 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an 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 a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

## **SITE ASSESSMENT ACTIVITIES**

Beginning August 22, 2022, through August 23, 2022, Ensolum personnel arrived onsite to assess the vertical extent of waste-containing soil in both subject matter releases. A pothole (PH01) was advanced via mechanical equipment in the vicinity of surface sample SS02 which was collected on September 24, 2018, and associated with Incident Number NAB1422341439. Pothole (Ph01) was advanced to a depth of 1-foot bgs; soil samples were collected at 0.5 feet and 1-foot bgs and submitted for laboratory

analysis. Eleven potholes (PH01 through PH11) were advanced via backhoe in the release area associated with Incident Number NAB1706053151 to a terminal depth of 1-foot bgs in potholes (PH01 through PH09 and PH11); Pothole PH10 was collected at a terminal depth of 2 feet bgs. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations from the borehole were logged on a lithologic/soil sampling log, which is included in Appendix C. The release extent and preliminary soil sample location were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix D.

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 transported under strict chain-of-custody procedures to Eurofins, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil sample SS02 collected on September 24, 2018, indicated concentrations of chloride exceeded the strictest Site Closure Criteria at a depth of 1-foot bgs indicating further vertical delineation would be required. Laboratory analytical results from pothole (PH01) indicated COC concentrations, associated with Incident Number NAB1422341439, were all in compliance with the strictest Closure Criteria per NMOCD Table I at ground surface and 1-foot bgs. Laboratory analytical results for soil samples collected from potholes associated with Incident Number NAB1706053151 (PH01 through PH11) indicated all COCs were in compliance with the Site Closure Criteria and successfully defined the lateral and vertical extents of the release.

## DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

Beginning on March 12, 2024, through March 13, 2024, Ensolum personnel returned to the Site to complete additional delineation sampling activities in sample location SS02, which is associated with Incident Number NAB1422341439. Sample location SS02 was advanced via backhoe to a terminal depth of 10 feet bgs in order to assess the vertical extent of the spill area in accordance with the strictest Closure Criteria per NMOCD Table I. Discrete delineation soil samples were collected from the pothole (SS02) at depths ranging from 3 feet to 10 feet bgs.

In addition to the delineation sampling activities, Ensolum personnel were onsite to oversee the excavation of confirmation sample areas FS01 and FS02, associated with Incident Number NAB1706053151. It was determined that sample areas FS01 and FS02 were located off-pad and as such, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the confirmation sample areas. Confirmation sample areas FS01 and FS02 were advanced via backhoe to a depth of 4 feet bgs. Approximately 30 cubic yards of soil from removed from the excavation area and transported to R360 in Hobbs, New Mexico for disposal. The excavation area will be backfilled and recontoured to match preexisting conditions and reseeded with the appropriate BLM seed mixture.

Ensolum personnel collected two, 5-point composite soil samples representing up to 200 square feet from the floor of the excavation (FS01@4' and FS02@4'). The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation extent and excavation soil sample locations are presented on Figure 4.

The soil samples collected from pothole SS02 and confirmation floor samples FS01@4' and FS02@4' were field screened for TPH utilizing a PetroFLAG® Hydrocarbon Test Kit and chloride with Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole were logged on a lithologic/soil sampling log, which is included in Appendix C. 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 transported under strict chain-of-custody procedures to Envirotech Analytical Laboratory (Envirotech) in Farmington, New Mexico, for analysis of the following COCs: BTEX; TPH- GRO, TPH-DRO, and TPH-ORO; and chloride following Standard Method SM4500.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for vertical delineation soil samples collected from sample location SS02 were in compliance with the strictest Closure Criteria at 10 feet bgs and were all in compliance with the Site Closure Criteria from ground surface to 10 feet bgs. Laboratory analytical results for excavation floor samples FS01@4' and FS02@4' were both in compliance with the strictest Closure Criteria per NMOCD Table I. Laboratory analytical results are summarized in Tables 1 and 2 and laboratory analytical reports are included in Appendix E.

## CLOSURE REQUEST

On behalf of WPX, Ensolum hereby requests closure for the releases associated with Incident Numbers NAB1422341439 and NAB1706053151 based on the findings and conclusions listed below:

- Depth to water has been reasonably determined for the Site based on depth to groundwater data from NMOSE well C-4068 POD1, which is located 0.24 miles from the Site and indicates groundwater is greater than 125 feet bgs.
- Vertical delineation sampling in the vicinity of soil sample SS02 (Incident Number NAB1422341439) was achieved at a depth of 10 feet bgs. The release area is still on an active oil and gas well pad and COC concentrations are all below the Site Closure Criteria for samples SS01 through SS04 and for pothole PH01.
- The off-pad spill area associated with Incident Number NAB1706053151 was excavated in accordance with the reclamation requirement and all confirmation soil samples met the requirements set forth in 19.15.29.13 NMAC.

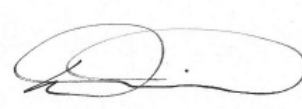
Based on the remedial actions taken at the Site, WPX believes they have been protective of human health, the environment, and groundwater.

If you have any questions or comments, please contact Ms. Ashley Giovengo at (575) 988-0055 or [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Ashley Giovengo  
Senior Scientist



Daniel R. Moir, PG (licensed in WY & TX)  
Senior Managing Geologist

cc: Jim Raley, WPX Energy Permian, LLC  
Bureau of Land Management

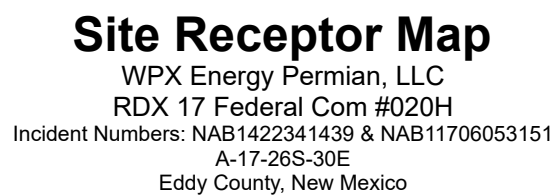
Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations (NAB1422341439)
Figure 3	Delineation Soil Sample Locations (NAB1706053151)
Figure 4	Confirmation Soil Sample Locations (NAB1706053151)
Table 1	Soil Sample Analytical Results (NAB1422341439)
Table 2	Soil Sample Analytical Results (NAB1706053151)
Appendix A	Form C-141
Appendix B	Referenced Well Records
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Photographic Log
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F	NMOCD Notifications



FIGURES





**FIGURE**  
**1**

**Legend**

- Delineation Soil Sample Location in Compliance with Closure Criteria



PH01@0.5'  
PH01@1'

SS02@0.5'  
SS02@1'  
SS02@3'  
SS02@5'  
SS02@7'  
SS02@9'  
SS02@10'

SS03@0.5'  
SS03@1'

SS01@0.5'  
SS01@1'

SS04@0.5'  
SS04@1'

Notes:  
Sample ID @ Depth Below Ground Surface.  
Samples in bold indicate sample exceed delineation criteria.

0 25 50  
Feet

Sources: Environmental Systems Research Institute (ESRI)



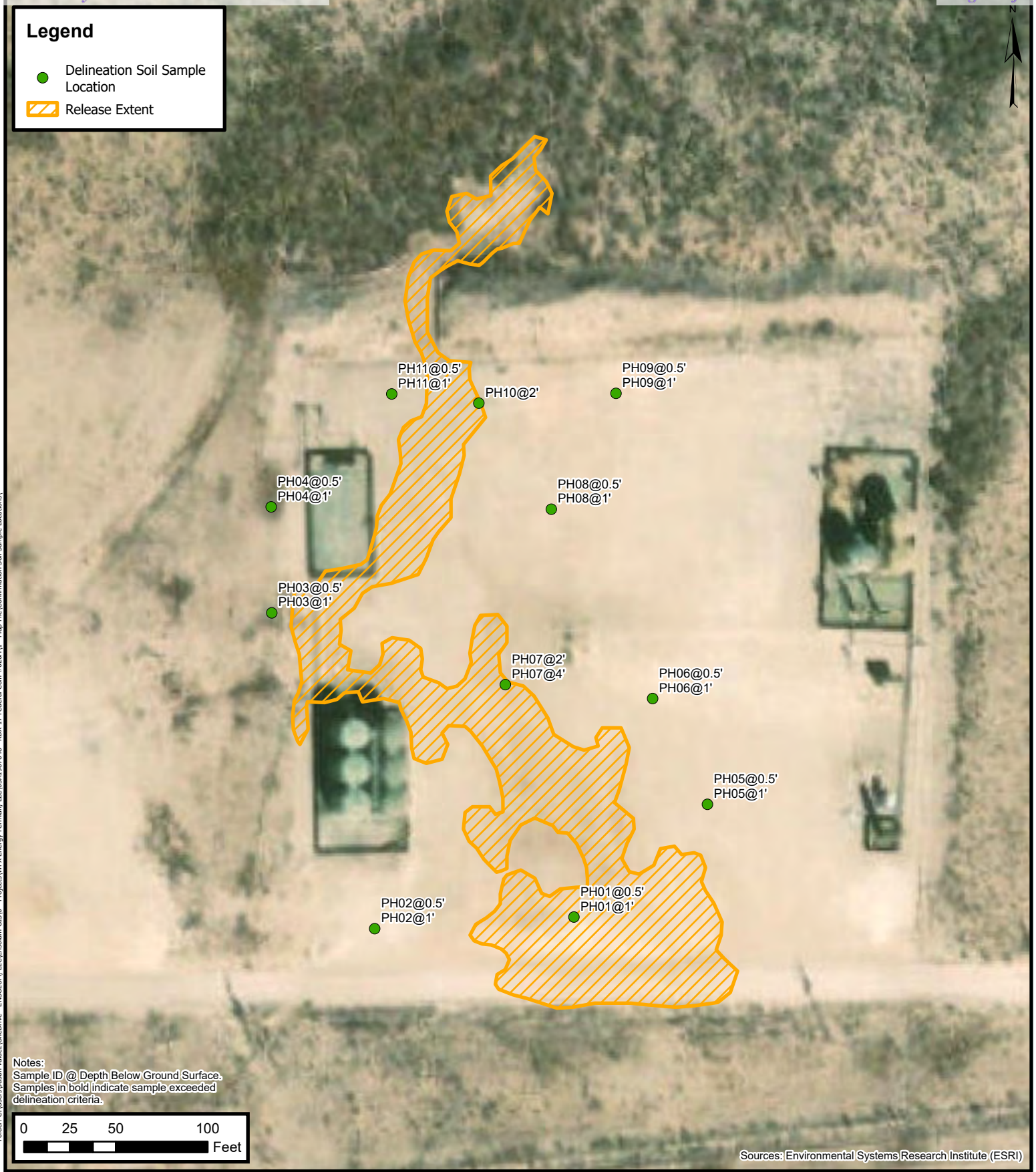
## Delineation Soil Sample Locations

WPX Energy Permian, LLC  
RDX 17 Federal Com #020H  
Incident Number: NAB1422341439  
A-17-26S-30E  
Eddy County, New Mexico

## FIGURE

## 2





## Delineation Soil Sample Locations

WPX Energy Permian, LLC  
RDX 17 Federal Com #020H  
Incident Number: NAB11706053151  
A-17-26S-30E  
Eddy County, New Mexico

FIGURE

3

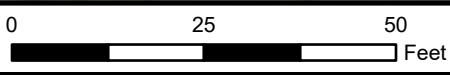


Legend

- Excavation Floor Sample on Pad in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- Excavation Floor Sample in Compliance with Closure Criteria
- Excavation Extent



Notes:  
Sample ID @ Depth Below Ground Surface.  
Samples in bold indicate sample exceeded closure criteria.



Sources: Environmental Systems Research Institute (ESRI)

Confirmation Soil Sample Locations

WPX Energy Permian, LLC  
RDX 17 Federal Com #020H  
Incident Number: NAB11706053151  
A-17-26S-30E  
Eddy County, New Mexico

FIGURE  
4





TABLES



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> WXP Energy Permian, LLC RDX 17 Federal Com #020H Incident Number: NAB1422341439 Eddy County, New Mexico Ensolum Project No. 03A1987048										
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)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>20,000</b>
<b>Delineation Soil Sample Analytical Results</b>										
SS01	09/24/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	181
SS01	09/24/2018	1	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	68.4
SS02	09/24/2018	0.5	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	459
SS02	09/24/2018	1	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,140
SS02	03/12/2024	3	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,350
SS02	03/12/2024	5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,460
SS02	03/12/2024	7	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	616
SS02	03/12/2024	9	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	644
SS02	03/12/2024	10	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	385
SS03	09/24/2018	0.5	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	70.1
SS03	09/24/2018	1	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	119
SS04	09/24/2018	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	119
SS04	09/24/2018	1	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	84.4
PH01	08/22/2022	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	97.1
PH01	08/22/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	72.5

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in bold exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.





**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 WXP Energy Permian, LLC  
 RDX 17 Federal Com #020H  
 Incident Number: NAB1706053151  
 Eddy County, New Mexico  
 Ensolum Project No. 03A1987048

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)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>20,000</b>
<b>Delineation Soil Sample Analytical Results</b>										
PH01	08/22/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	29.5
PH01	08/22/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	69.1
PH02	08/22/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	12.5
PH02	08/22/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	16.4
PH03	08/22/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	42.4
PH03	08/22/2022	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	113
PH04	08/22/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	22.3
PH04	08/22/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	29.0
PH05	08/22/2022	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	97.1
PH05	08/22/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	72.5
PH06	08/22/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	204
PH06	08/22/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	101
PH07	08/22/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,200
PH07	08/22/2022	4	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	657
PH08	08/22/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	48.9
PH08	08/22/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	67.7
PH09	08/23/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	121
PH09	08/23/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	74.8
PH10	08/23/2022	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	130
PH11	08/22/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	31.9
PH11	08/22/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	80.0

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in bold exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.



**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 WXP Energy Permian, LLC  
 RDX 17 Federal Com #020H  
 Incident Number: NAB1706053151  
 Eddy County, New Mexico  
 Ensolum Project No. 03A1987048

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)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCDC Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>20,000</b>
<b>Excavation Soil Sample Analytical Results</b>										
FS01	09/27/2022	2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	3,060
FS01	3/13/2024	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,070
FS02	09/27/2022	2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	3,450
FS02	3/13/2024	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,460
FS03	09/27/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	370
FS04	09/27/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	31.4
FS05	09/27/2022	2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	25.7
FS06	09/27/2022	0.5	<0.00201	<0.00402	<50.0	55.1	<50.0	<50.0	55.1	62.2
FS07	09/27/2022	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	29.2
FS08	09/27/2022	3.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	24.5
FS09	09/27/2022	1.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	27.0
FS10	09/27/2022	1.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	25.6
FS11	09/27/2022	1.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	30.9
FS12	09/27/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	28.6
FS13	09/27/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	25.2
FS14	09/27/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	21.6
SW01	09/27/2022	0 - 2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	24.5
SW02	09/27/2022	0 - 2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	34.2
SW03	09/27/2022	0 - 3.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	39.7
SW04	09/27/2022	0 - 3.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	237

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCDC: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Grey text represents samples that have been excavated

Concentrations in bold exceed the NMOCDC Table I Closure Criteria or reclamation standard where applicable.

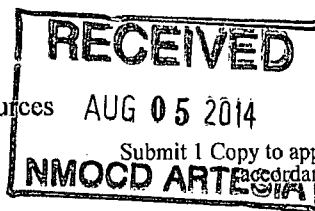


APPENDIX A

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



Form C-141  
Revised August 8, 2011

### Release Notification and Corrective Action

*NA 142 231439* OPERATOR ☐ Initial Report ☐ Final Report

Name of Company: RKI E&P	Contact: Zack Laird – Sr. EHS Manager
Address: 210 Park Ave. Ste. 900, OKC, OK 73102	Telephone No.: 405-987-2213 or 405-742-2696
Facility Name: RDX Fed Com 17-20H	Facility Type: Oil Well Pad

Surface Owner: Federal	Mineral Owner: Federal	API No.: 30-015-41381
------------------------	------------------------	-----------------------

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	17	26S	30E	330	North	790	East	Eddy

Latitude 32°02'56.25" N Longitude 103°53'50.70" W

### NATURE OF RELEASE

Type of Release: Frac Fluid (fresh water w/ various chems)	Volume of Release: 700Bbls	Volume Recovered: 698 Bbls
Source of Release: Frac Vendor Back-up Blender Tub	Date and Hour of Occurrence: 07/28/14 – 1800hrs (estimated)	Date and Hour of Discovery: 07/30/14 – 0800hrs
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* Back-up blender isolation valve (check valve) is thought to have been leaking which allowed frac fluid to backflow from active blender to the back-up and overflow. The back-up blender was isolated and removed from service. The Frac Vendor, Weatherford International, is currently investigating to determine specific causation and corrective action(s). The blender will not be placed back into service on an RKI job until adequately repaired.		
Describe Area Affected and Cleanup Action Taken.* Approximately 200 Bbls of released frac fluid was recovered from secondary containment while pumping and an additional nearly 500 Bbls was recovered from the well pad itself at the conclusion of pumping operations and demobilization of frac equipment.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCd rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCd marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCd acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature:	OIL CONSERVATION DIVISION	
Printed Name: Zack Laird	Signed By:	
Title: Sr. EHS Manager	Approved by Environmental Specialist:	
E-mail Address: ZLaird@RKIXP.com	Approval Date: 8/11/14	Expiration Date: N/A
Date: 08/05/14	Phone: 405-987-2213	Conditions of Approval: Remediation Per O.C.D. Rule & Guidelines
		Attached <input type="checkbox"/>

SUBMIT REMEDIATION PROPOSAL NO  
LATER THAN: 9/11/14

2RP-2427



Incident ID	nAB1422341439
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Volume exceeded 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given to NMOCD on 07/29/2016 by Karolina Blaney via email.	

## 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: <u>Jim Raley</u>	Title: <u>EHS Professional</u>
Signature: _____	Date: <u>05/10/2023</u>
email: <u>jim.raley@dmv.com</u>	Telephone: <u>575-689-7597</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	nAB1422341439
District RP	
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>&gt;125</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 <b>not</b> 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.

<p><b>Characterization Report Checklist:</b> <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li><li><input checked="" type="checkbox"/> Field data</li><li><input checked="" type="checkbox"/> Data table of soil contaminant concentration data</li><li><input checked="" type="checkbox"/> Depth to water determination</li><li><input checked="" type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li><li><input checked="" type="checkbox"/> Boring or excavation logs</li><li><input checked="" type="checkbox"/> Photographs including date and GIS information</li><li><input checked="" type="checkbox"/> Topographic/Aerial maps</li><li><input checked="" type="checkbox"/> Laboratory data including chain of custody</li></ul>
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If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Incident ID	nAB1422341439
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: EHS Professional  
Signature: \_\_\_\_\_ Date: 05/10/2023  
email: jim.raley@dvn.com Telephone: 575-689-7597

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nAB1422341439
District RP	
Facility ID	
Application ID	

## Remediation Plan

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

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Incident ID	nAB1422341439
District RP	
Facility ID	
Application ID	

## Closure

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 (electronic submittals in .pdf format are preferred) 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.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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.

Printed Name: Jim Raley Title: EHS Professional

Signature: \_\_\_\_\_ Date: 05/10/2023

email: jim.raley@dvn.com Telephone: 575-689-7597

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

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

**NM OIL CONSERVATION** State of New Mexico  
Energy Minerals and Natural Resources  
ARTESIA DISTRICT

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

FEB 27 2017 Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

FEB 27 2017 Submit to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

RECEIVED

**Release Notification and Corrective Action**

NAB1706053151

**OPERATOR**☒ Initial Report ☐ Final Report

Name of Company	WPX Energy Inc/RKI	Contact	Karolina Blaney
Address	5315 Buena Vista Dr.	Telephone No.	970 589 0743
Facility Name	RDX 17-20H	Facility Type	Well Pad

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-41381
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	17	26S	30E	330	FNL	790	FEL	Eddy

Latitude: 32.0488344 N Longitude: -103.8969563 W

**NATURE OF RELEASE**

Type of Release: Produced Water and Oil	Volume of Release: 400 Bbls	Volume Recovered: 100 Bbls
Source of Release Vapor Recovery Unit	Date and Hour of Occurrence 2/10/2017	Date and Hour of Discovery 2/10/2017 - 7:00 hrs MT
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Crystal Weaver & Michael Bratcher, BLM Shelly Tucker	
By Whom? Karolina Blaney	Date and Hour: 2/10/2017 - 2:22hrs MT	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.\*

The cause of the spill is mechanical failure; a hose on a charge pump was exposed to constant vibration and developed a hole. Approximately 400 bbls of produced water got spilled with 100 bbls recovered with a vacuum truck. Some of the spilled fluids migrated to the north of the well pad and impacted an area of ~100'x100'.

Describe Area Affected and Cleanup Action Taken.\*

The impacted area was mapped with Trimble. With BLM's approval, the impacted area off location will be excavated to 2' below the surface to address high salt concentrations. The excavation activities will start the week of 2/27/17. WPX will submit a Characterization Plan describing delineation activities for salt and hydrocarbon impacts.

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

Signature: <i>Karolina Blaney</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Karolina Blaney	Approved by Environmental Specialist: <i>Crystal Weaver</i>	
Title: Environmental Specialist	Approval Date: 3/1/17	Expiration Date: N/A
E-mail Address: Karolina.blaney@wpxenergy.com	Conditions of Approval: COAs attached	
Date: 2/24/2017 Phone: 970-589-0743	Attached <input checked="" type="checkbox"/>	

\* Attach Additional Sheets If Necessary

2RP-4132

Incident ID	nAB1706053151
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Volume exceeded 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given to NMOCD on 07/29/2016 by Karolina Blaney via email.	

## 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: <u>Jim Raley</u> Title: <u>EHS Professional</u>  Signature: _____ Date: <u>05/10/2023</u>  email: <u>jim.raley@dvn.com</u> Telephone: <u>575-689-7597</u>	
<b><u>OCD Only</u></b>  Received by: _____ Date: _____	

Incident ID	nAB1706053151
District RP	
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>&gt;125</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 <b>not</b> 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.



State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	nAB1706053151
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: EHS Professional  
Signature: \_\_\_\_\_ Date: 05/10/2023  
email: jim.raley@dvn.com Telephone: 575-689-7597

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nAB1706053151
District RP	
Facility ID	
Application ID	

## Remediation Plan

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

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nAB1706053151
District RP	
Facility ID	
Application ID	

## Closure

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 (electronic submittals in .pdf format are preferred) 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.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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.

Printed Name: Jim Raley Title: EHS Professional  
Signature: \_\_\_\_\_ Date: 05/10/2023  
email: jim.raley@dvn.com Telephone: 575-689-7597

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



## APPENDIX B

### Referenced Well Records

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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

STATE OF NEW MEXICO  
ROBERTO L. RAY, MEXICO

2017 MAY 17 PM 1:58

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) C-4068 POD1				OSE FILE NUMBER(S) C-4068			
	WELL OWNER NAME(S) RKI Exploration and Production, LLC				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 3500 One Williams Center MD 35,				CITY Tulsa		STATE OK	ZIP 74172
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 2 43.95 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
		LONGITUDE	103	53 39.23 W				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW/4SW/4NW/4 Section 16, Township 26S, Range 30 E, N.M.P.M.								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 5/11/2017		DRILLING ENDED 5/12/2017		DEPTH OF COMPLETED WELL (FT) n/a	BORE HOLE DEPTH (FT) 125		DEPTH WATER FIRST ENCOUNTERED (FT) none encountered
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a	
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: hollow stem auger with air rotary							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	125						
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	n/a	n/a						n/a

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 10/29/15)

FILE NUMBER	C-4068	POD NUMBER	1	TRN NUMBER	606777
LOCATION	26S-30E-16-1-3-1			EXPL	PAGE 1 OF 2

#### 4. HYDROGEOLOGIC LOG OF WELL

## 5. TEST; RIG SUPERVISION

## 6. SIGNATURE

FOR USE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 10/29/2015)	
FILE NUMBER	C-4068	POD NUMBER	1
LOCATION	26S 30E 11n 10.3.1	TRN NUMBER	606777
			EXP1
			PAGE 2 OF 2



Tom Blaine, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 606777  
File Nbr: C 04068  
Well File Nbr: C 04068 POD1

Jun. 12, 2017

JUSTIN BARMORE  
RKI EXPLORATION AND PRODUCTION LLC  
3500 ONE WILLIAMS CENTER MD 35  
TULSA, OK 74172

Greetings:

The above numbered permit was issued in your name on 05/08/2017.

The Well Record was received in this office on 05/17/2017, stating that it had been completed on 05/12/2017, and was a dry well. The well is to be plugged or capped or otherwise maintained in a manner satisfactory to the State Engineer.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 05/15/2018.

If you have any questions, please feel free to contact us.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Dunaway".

Deborah Dunaway  
(575) 622-6521


drywell



## APPENDIX C

### Lithologic Soil Sampling Logs

---

								Sample Name: SS02		Date: 3/12/24	
								Site Name: RDX 17 Federal Com #020H			
								Incident Number: NAB1422341439			
								Job Number: 03A1987048			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Israel Estrella		Method: Backhoe	
Coordinates: 32.04905, -103.89746								Hole Diameter: 3'		Total Depth: 10'	
Comments: Field screening conducted with HACH Chloride Test Strips and Petroflag for chloride and TPH, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	TPH (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D			N	SS02	0	0	CCHE	Caliche - Tan, No odor, No staining			
D			N	SS02	1	1					
M	2,576		N	SS02	2	2	SP-SM	Sand/Silt - Dark brown, trace gravel, no odor no staining			
M	1,708		N	SS02	3	3					
D	1,181		N	SS02	4	4	SM	Sand - Tan, trace gravel, no odor no staining			
D	1,092		N	SS02	5	5					
D	862		N	SS02	6	6					
D	520		N	SS02	7	7					
D	1,108		N	SS02	8	8					
D	644		N	SS02	9	9					
D	414	64	N	SS02	10	10					
Total Depth = 10'											



## APPENDIX D

### Photographic Log

---

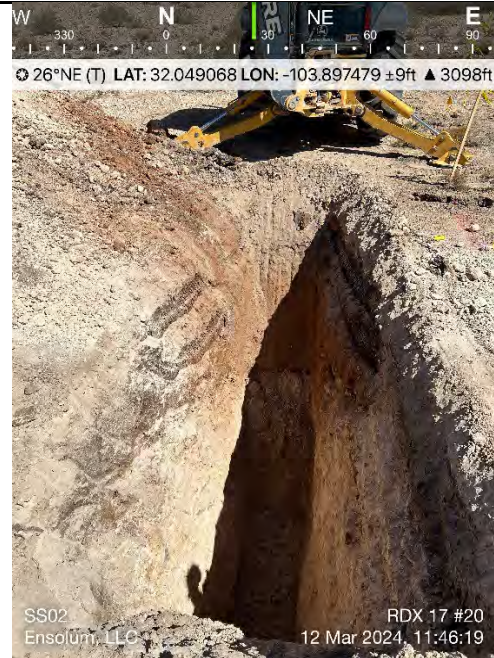


### Photographic Log

WPX Energy Permian, LLC  
RDX 17 Federal Com #020H  
NAB1422341439 & NAB1706053151



Photograph 1  
Date: 3/12/24  
Description: Delineation sampling  
View: North



Photograph 2  
Date: 3/12/24  
Description: Delineation sampling  
View: North



Photograph 3  
Date: 3/13/24  
Description: Excavation  
View: South



Photograph 4  
Date: 3/13/24  
Description: Excavation  
View: South



## APPENDIX E

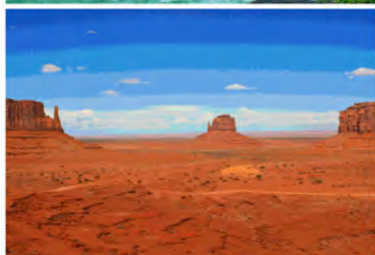
### Laboratory Analytical Reports & Chain of Custody Documentation

---



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Ensolum, LLC

Project Name: RDX 17 #20

Work Order: E403133

Job Number: 01058-0007

Received: 3/14/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
3/19/24

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: 3/19/24

Ashley Giovengo  
3122 National Parks Hwy  
Carlsbad, NM 88220



Project Name: RDX 17 #20  
Workorder: E403133  
Date Received: 3/14/2024 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/14/2024 8:00:00AM, under the Project Name: RDX 17 #20.

The analytical test results summarized in this report with the Project Name: RDX 17 #20 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  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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Office: 505-632-1881  
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**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	03/19/24 13:13

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS02-3'	E403133-01A	Soil	03/12/24	03/14/24	Glass Jar, 2 oz.
SS02-5'	E403133-02A	Soil	03/12/24	03/14/24	Glass Jar, 2 oz.
SS02-7'	E403133-03A	Soil	03/12/24	03/14/24	Glass Jar, 2 oz.



Sample Data

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	Reported: 3/19/2024 1:13:27PM

SS02-3'  
E403133-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Benzene	ND	0.0250	1	03/14/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/14/24	03/19/24	
Toluene	ND	0.0250	1	03/14/24	03/19/24	
o-Xylene	ND	0.0250	1	03/14/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/14/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/14/24	03/19/24	
Surrogate: 4-Bromochlorobenzene-PID	96.2 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/14/24	03/19/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.2 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2411130	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/15/24	03/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/15/24	03/16/24	
Surrogate: n-Nonane	83.2 %	50-200		03/15/24	03/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2412009	
Chloride	2350	20.0	1	03/18/24	03/19/24	



Sample Data

Ensolum, LLC 3122 National Parks Hwy Carlsbad NM, 88220	Project Name: RDX 17 #20 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 3/19/2024 1:13:27PM
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SS02-5'

E403133-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Benzene	ND	0.0250	1	03/14/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/14/24	03/19/24	
Toluene	ND	0.0250	1	03/14/24	03/19/24	
o-Xylene	ND	0.0250	1	03/14/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/14/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/14/24	03/19/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.9 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/14/24	03/19/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.2 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2411130	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/15/24	03/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/15/24	03/16/24	
<i>Surrogate: n-Nonane</i>						
	77.9 %	50-200		03/15/24	03/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2412009	
Chloride	1460	20.0	1	03/18/24	03/19/24	



Sample Data

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/19/2024 1:13:27PM

SS02-7'

E403133-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>		mg/kg	mg/kg	Analyst: EG		Batch: 2411110
Benzene	ND	0.0250	1	03/14/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/14/24	03/19/24	
Toluene	ND	0.0250	1	03/14/24	03/19/24	
o-Xylene	ND	0.0250	1	03/14/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/14/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/14/24	03/19/24	
Surrogate: 4-Bromochlorobenzene-PID		95.4 %	70-130	03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>		mg/kg	mg/kg	Analyst: EG		Batch: 2411110
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/14/24	03/19/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.7 %	70-130	03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>		mg/kg	mg/kg	Analyst: KM		Batch: 2411130
Diesel Range Organics (C10-C28)	ND	25.0	1	03/15/24	03/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/15/24	03/16/24	
Surrogate: n-Nonane		86.2 %	50-200	03/15/24	03/16/24	
<b>Anions by EPA 300.0/9056A</b>		mg/kg	mg/kg	Analyst: IY		Batch: 2412009
Chloride	616	20.0	1	03/18/24	03/19/24	



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/19/2024 1:13:27PM

Volatile Organics by EPA 8021B

Analyst: EG

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 (2411110-BLK1) Prepared: 03/14/24 Analyzed: 03/18/24

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	7.54		8.00		94.2	70-130			

LCS (2411110-BS1) Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	4.94	0.0250	5.00		98.7	70-130			
Ethylbenzene	4.96	0.0250	5.00		99.3	70-130			
Toluene	4.95	0.0250	5.00		99.0	70-130			
o-Xylene	4.90	0.0250	5.00		98.0	70-130			
p,m-Xylene	10.0	0.0500	10.0		100	70-130			
Total Xylenes	14.9	0.0250	15.0		99.3	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.4	70-130			

Matrix Spike (2411110-MS1) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	4.92	0.0250	5.00	ND	98.3	54-133			
Ethylbenzene	4.91	0.0250	5.00	ND	98.1	61-133			
Toluene	4.92	0.0250	5.00	ND	98.3	61-130			
o-Xylene	4.82	0.0250	5.00	ND	96.4	63-131			
p,m-Xylene	9.89	0.0500	10.0	ND	98.9	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.47		8.00		93.4	70-130			

Matrix Spike Dup (2411110-MSD1) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	5.10	0.0250	5.00	ND	102	54-133	3.65	20	
Ethylbenzene	5.08	0.0250	5.00	ND	102	61-133	3.42	20	
Toluene	5.08	0.0250	5.00	ND	102	61-130	3.35	20	
o-Xylene	4.99	0.0250	5.00	ND	99.8	63-131	3.45	20	
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131	3.35	20	
Total Xylenes	15.2	0.0250	15.0	ND	101	63-131	3.39	20	
Surrogate: 4-Bromochlorobenzene-PID	7.50		8.00		93.7	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/19/2024 1:13:27PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

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 (2411110-BLK1) Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.59		8.00		94.9	70-130			

LCS (2411110-BS2) Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	52.6	20.0	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.77		8.00		97.1	70-130			

Matrix Spike (2411110-MS2) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	51.9	20.0	50.0	ND	104	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.37		8.00		92.1	70-130			

Matrix Spike Dup (2411110-MSD2) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	51.9	20.0	50.0	ND	104	70-130	0.170	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/19/2024 1:13:27PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

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 (2411130-BLK1)

Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	46.2		50.0		92.4	50-200			

LCS (2411130-BS1)

Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	254	25.0	250		102	38-132			
Surrogate: n-Nonane	47.5		50.0		95.0	50-200			

Matrix Spike (2411130-MS1)

Source: E403118-02 Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	253	25.0	250	ND	101	38-132			
Surrogate: n-Nonane	42.3		50.0		84.6	50-200			

Matrix Spike Dup (2411130-MSD1)

Source: E403118-02 Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	250	25.0	250	ND	100	38-132	1.11	20	
Surrogate: n-Nonane	43.2		50.0		86.4	50-200			





QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/19/2024 1:13:27PM

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 (2412009-BLK1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	ND	20.0							
LCS (2412009-BS1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	258	20.0	250		103	90-110			
LCS Dup (2412009-BSD1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	258	20.0	250		103	90-110	0.191	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

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	03/19/24 13:13

- 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: Ensolum

Report due by:		<b>Bill To</b>		<b>Lab Use Only</b>						<b>TAT</b>				<b>EPA Program</b>					
Project: RDX 17 #20		Attention: Jim Raley		Lab WO#		Job Number				1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo		Address: 5315 Buena Vista Dr		E403133		0105B-0007							x						
Address: 3122 National Parks Hwy		City, State, Zip: Carlsbad NM, 88220		Analysis and Method											RCRA				
City, State, Zip: Carlsbad NM, 88220		Phone: (575)689-7597		V/DRO/ORO by	8021	1260	010	300.0			NM		TX						
Phone: 575-988-0055		Email: jjim.raley@dvn.com																	
Email: agiovengo@ensolum.com																			
Report due by:														State					
														NM	CO	UT	AZ	TX	

[illegible]

Additional Instructions: Please CC: [cburton@ensolum.com](mailto:cburton@ensolum.com), [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com), [jim.raley@dvn.com](mailto:jim.raley@dvn.com), [chamilton@ensolum.com](mailto:chamilton@ensolum.com), [iestrella@ensolum.com](mailto:iestrella@ensolum.com)

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: Israel Estrella

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 3/13/24	Time 8:35	Received by: (Signature) <i>[Signature]</i>	Date 3-13-24	Time 1002	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <i>[Signature]</i>	Date 3-13-24	Time 1530	Received by: (Signature) <i>[Signature]</i>	Date 3-13-24	Time 1700	
Relinquished by: (Signature) <i>[Signature]</i>	Date 3-13-24	Time 2300	Received by: (Signature) <i>[Signature]</i>	Date 3/14/24	Time 0900	

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: 3/14/2024 2:59:34PM

## 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:	Ensolum, LLC	Date Received:	03/14/24 08:00	Work Order ID:	E403133
Phone:	(575) 988-0055	Date Logged In:	03/13/24 17:38	Logged In By:	Alexa Michaels
Email:	a.giovengo@ensolum.com	Due Date:	03/20/24 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 | Carrier: <u>Courier</u> |
| 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? | No  |                         |
| 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.

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: <u>4°C</u> |
|--|

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 InstructionComments/Resolution

Client name was not on COC. Added Ensolum on COC as client per Lynn per text message

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

Date



envirotech Inc.

Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Ensolum, LLC

Project Name: RDX 17 #20

Work Order: E403134

Job Number: 01058-0007

Received: 3/14/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
3/22/24

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: 3/22/24



Ashley Giovengo  
3122 National Parks Hwy  
Carlsbad, NM 88220

Project Name: RDX 17 #20  
Workorder: E403134  
Date Received: 3/14/2024 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/14/2024 8:00:00AM, under the Project Name: RDX 17 #20.

The analytical test results summarized in this report with the Project Name: RDX 17 #20 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  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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**Alexa Michaels**  
Sample Custody Officer  
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Field Offices:

**Southern New Mexico Area**

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**Michelle Golzales**  
Client Representative  
Office: 505-421-LABS(5227)  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Ensolum, LLC	Project Name:	RDX 17 #20	Reported: 03/22/24 10:32
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS02-9'	E403134-01A	Soil	03/12/24	03/14/24	Glass Jar, 2 oz.
SS02-10'	E403134-02A	Soil	03/12/24	03/14/24	Glass Jar, 2 oz.



Sample Data

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/22/2024 10:32:20AM

SS02-9'  
E403134-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Benzene	ND	0.0250	1	03/14/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/14/24	03/19/24	
Toluene	ND	0.0250	1	03/14/24	03/19/24	
o-Xylene	ND	0.0250	1	03/14/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/14/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/14/24	03/19/24	
Surrogate: 4-Bromochlorobenzene-PID	95.4 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/14/24	03/19/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.1 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2411130	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/15/24	03/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/15/24	03/16/24	
Surrogate: n-Nonane	79.4 %	50-200		03/15/24	03/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2412009	
Chloride	644	20.0	1	03/18/24	03/19/24	



Sample Data

Ensolum, LLC 3122 National Parks Hwy Carlsbad NM, 88220	Project Name: RDX 17 #20 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 3/22/2024 10:32:20AM
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SS02-10'

E403134-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Benzene	ND	0.0250	1	03/14/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/14/24	03/19/24	
Toluene	ND	0.0250	1	03/14/24	03/19/24	
o-Xylene	ND	0.0250	1	03/14/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/14/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/14/24	03/19/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.3 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2411110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/14/24	03/19/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.6 %	70-130		03/14/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2411130	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/15/24	03/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/15/24	03/16/24	
<i>Surrogate: n-Nonane</i>						
	86.0 %	50-200		03/15/24	03/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2412009	
Chloride	385	40.0	2	03/18/24	03/19/24	



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/22/2024 10:32:20AM

Volatile Organics by EPA 8021B

Analyst: EG

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 (2411110-BLK1)Prepared: 03/14/24 Analyzed: 03/18/24

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	7.54		8.00		94.2	70-130			

LCS (2411110-BS1)Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	4.94	0.0250	5.00		98.7	70-130			
Ethylbenzene	4.96	0.0250	5.00		99.3	70-130			
Toluene	4.95	0.0250	5.00		99.0	70-130			
o-Xylene	4.90	0.0250	5.00		98.0	70-130			
p,m-Xylene	10.0	0.0500	10.0		100	70-130			
Total Xylenes	14.9	0.0250	15.0		99.3	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.4	70-130			

Matrix Spike (2411110-MS1)Source: E403125-04Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	4.92	0.0250	5.00	ND	98.3	54-133			
Ethylbenzene	4.91	0.0250	5.00	ND	98.1	61-133			
Toluene	4.92	0.0250	5.00	ND	98.3	61-130			
o-Xylene	4.82	0.0250	5.00	ND	96.4	63-131			
p,m-Xylene	9.89	0.0500	10.0	ND	98.9	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.47		8.00		93.4	70-130			

Matrix Spike Dup (2411110-MSD1)Source: E403125-04Prepared: 03/14/24 Analyzed: 03/18/24

Benzene	5.10	0.0250	5.00	ND	102	54-133	3.65	20	
Ethylbenzene	5.08	0.0250	5.00	ND	102	61-133	3.42	20	
Toluene	5.08	0.0250	5.00	ND	102	61-130	3.35	20	
o-Xylene	4.99	0.0250	5.00	ND	99.8	63-131	3.45	20	
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131	3.35	20	
Total Xylenes	15.2	0.0250	15.0	ND	101	63-131	3.39	20	
Surrogate: 4-Bromochlorobenzene-PID	7.50		8.00		93.7	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/22/2024 10:32:20AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

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 (2411110-BLK1) Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.59		8.00		94.9	70-130			

LCS (2411110-BS2) Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	52.6	20.0	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.77		8.00		97.1	70-130			

Matrix Spike (2411110-MS2) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	51.9	20.0	50.0	ND	104	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.37		8.00		92.1	70-130			

Matrix Spike Dup (2411110-MSD2) Source: E403125-04 Prepared: 03/14/24 Analyzed: 03/18/24

Gasoline Range Organics (C6-C10)	51.9	20.0	50.0	ND	104	70-130	0.170	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.41		8.00		92.7	70-130			





QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/22/2024 10:32:20AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

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 (2411130-BLK1) Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	46.2		50.0		92.4	50-200			

LCS (2411130-BS1) Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	254	25.0	250		102	38-132			
Surrogate: n-Nonane	47.5		50.0		95.0	50-200			

Matrix Spike (2411130-MS1) Source: E403118-02 Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	253	25.0	250	ND	101	38-132			
Surrogate: n-Nonane	42.3		50.0		84.6	50-200			

Matrix Spike Dup (2411130-MSD1) Source: E403118-02 Prepared: 03/15/24 Analyzed: 03/16/24

Diesel Range Organics (C10-C28)	250	25.0	250	ND	100	38-132	1.11	20	
Surrogate: n-Nonane	43.2		50.0		86.4	50-200			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/22/2024 10:32:20AM

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 (2412009-BLK1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	ND	20.0							
LCS (2412009-BS1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	258	20.0	250		103	90-110			
LCS Dup (2412009-BSD1)					Prepared: 03/18/24 Analyzed: 03/18/24				
Chloride	258	20.0	250		103	90-110	0.191	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

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	03/22/24 10:32

- 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.





## Envirotech Analytical Laboratory

Printed: 3/14/2024 4:34:31PM

## 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:	Ensolum, LLC	Date Received:	03/14/24 08:00	Work Order ID:	E403134
Phone:	(575) 988-0055	Date Logged In:	03/13/24 17:40	Logged In By:	Alexa Michaels
Email:	a.giovengo@ensolum.com	Due Date:	03/20/24 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? No
5. Were all samples received within holding time? Yes

Carrier: Courier

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

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 InstructionComments/Resolution

Client name was not on COC. Added Ensolum on COC as client per Lynn per text message. See COC for Client remarks

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

Date

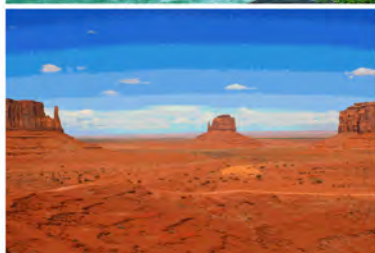


envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Ensolum, LLC

Project Name: RDX 17 #20

Work Order: E403142

Job Number: 01058-0007

Received: 3/15/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
3/20/24

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: 3/20/24

Ashley Giovengo  
3122 National Parks Hwy  
Carlsbad, NM 88220



Project Name: RDX 17 #20  
Workorder: E403142  
Date Received: 3/15/2024 6:45:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/15/2024 6:45:00AM, under the Project Name: RDX 17 #20.

The analytical test results summarized in this report with the Project Name: RDX 17 #20 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  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
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Field Offices:

**Southern New Mexico Area**

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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Ensolum, LLC	Project Name:	RDX 17 #20	Reported: 03/20/24 13:32
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01-4'	E403142-01A	Soil	03/13/24	03/15/24	Glass Jar, 2 oz.
FS02-4'	E403142-02A	Soil	03/13/24	03/15/24	Glass Jar, 2 oz.



Sample Data

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	Reported: 3/20/2024 1:32:41PM

FS01-4'  
E403142-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411141	
Benzene	ND	0.0250	1	03/15/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/15/24	03/19/24	
Toluene	ND	0.0250	1	03/15/24	03/19/24	
o-Xylene	ND	0.0250	1	03/15/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/15/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/15/24	03/19/24	
Surrogate: 4-Bromochlorobenzene-PID	94.1 %	70-130		03/15/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411141	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/15/24	03/19/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.7 %	70-130		03/15/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2412002	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/18/24	03/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/18/24	03/19/24	
Surrogate: n-Nonane	69.5 %	50-200		03/18/24	03/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2412021	
Chloride	1070	20.0	1	03/18/24	03/20/24	



Sample Data

Ensolum, LLC 3122 National Parks Hwy Carlsbad NM, 88220	Project Name: RDX 17 #20 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 3/20/2024 1:32:41PM
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FS02-4'

E403142-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411141	
Benzene	ND	0.0250	1	03/15/24	03/19/24	
Ethylbenzene	ND	0.0250	1	03/15/24	03/19/24	
Toluene	ND	0.0250	1	03/15/24	03/19/24	
o-Xylene	ND	0.0250	1	03/15/24	03/19/24	
p,m-Xylene	ND	0.0500	1	03/15/24	03/19/24	
Total Xylenes	ND	0.0250	1	03/15/24	03/19/24	
Surrogate: 4-Bromochlorobenzene-PID	94.2 %	70-130		03/15/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2411141	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/15/24	03/19/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	94.4 %	70-130		03/15/24	03/19/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2412002	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/18/24	03/19/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/18/24	03/19/24	
Surrogate: n-Nonane	74.8 %	50-200		03/18/24	03/19/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2412021	
Chloride	1460	20.0	1	03/18/24	03/20/24	



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/20/2024 1:32:41PM

Volatile Organics by EPA 8021B

Analyst: EG

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 (2411141-BLK1)Prepared: 03/15/24 Analyzed: 03/19/24

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	7.57		8.00		94.7	70-130			

LCS (2411141-BS1)Prepared: 03/15/24 Analyzed: 03/19/24

Benzene	4.94	0.0250	5.00		98.7	70-130			
Ethylbenzene	4.97	0.0250	5.00		99.4	70-130			
Toluene	4.95	0.0250	5.00		99.1	70-130			
o-Xylene	4.91	0.0250	5.00		98.3	70-130			
p,m-Xylene	10.0	0.0500	10.0		100	70-130			
Total Xylenes	14.9	0.0250	15.0		99.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.65		8.00		95.7	70-130			

Matrix Spike (2411141-MS1)Source: E403140-10Prepared: 03/15/24 Analyzed: 03/19/24

Benzene	4.93	0.0250	5.00	ND	98.6	54-133			
Ethylbenzene	4.97	0.0250	5.00	ND	99.5	61-133			
Toluene	4.95	0.0250	5.00	ND	99.1	61-130			
o-Xylene	4.91	0.0250	5.00	ND	98.3	63-131			
p,m-Xylene	10.0	0.0500	10.0	ND	100	63-131			
Total Xylenes	14.9	0.0250	15.0	ND	99.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.0	70-130			

Matrix Spike Dup (2411141-MSD1)Source: E403140-10Prepared: 03/15/24 Analyzed: 03/19/24

Benzene	5.00	0.0250	5.00	ND	100	54-133	1.35	20	
Ethylbenzene	5.06	0.0250	5.00	ND	101	61-133	1.82	20	
Toluene	5.03	0.0250	5.00	ND	101	61-130	1.59	20	
o-Xylene	5.02	0.0250	5.00	ND	100	63-131	2.12	20	
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131	1.94	20	
Total Xylenes	15.2	0.0250	15.0	ND	102	63-131	2.00	20	
Surrogate: 4-Bromochlorobenzene-PID	7.66		8.00		95.8	70-130			





QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/20/2024 1:32:41PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

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 (2411141-BLK1) Prepared: 03/15/24 Analyzed: 03/19/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.65		8.00		95.6	70-130			

LCS (2411141-BS2) Prepared: 03/15/24 Analyzed: 03/19/24

Gasoline Range Organics (C6-C10)	51.2	20.0	50.0		102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.64		8.00		95.5	70-130			

Matrix Spike (2411141-MS2) Source: E403140-10 Prepared: 03/15/24 Analyzed: 03/19/24

Gasoline Range Organics (C6-C10)	51.0	20.0	50.0	ND	102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.64		8.00		95.5	70-130			

Matrix Spike Dup (2411141-MSD2) Source: E403140-10 Prepared: 03/15/24 Analyzed: 03/19/24

Gasoline Range Organics (C6-C10)	51.0	20.0	50.0	ND	102	70-130	0.00294	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.65		8.00		95.6	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/20/2024 1:32:41PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

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 (2412002-BLK1) Prepared: 03/18/24 Analyzed: 03/18/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	37.9		50.0		75.8	50-200			

LCS (2412002-BS1) Prepared: 03/18/24 Analyzed: 03/18/24

Diesel Range Organics (C10-C28)	227	25.0	250		90.6	38-132			
Surrogate: n-Nonane	36.3		50.0		72.6	50-200			

Matrix Spike (2412002-MS1) Source: E403140-04 Prepared: 03/18/24 Analyzed: 03/18/24

Diesel Range Organics (C10-C28)	239	25.0	250	ND	95.6	38-132			
Surrogate: n-Nonane	40.0		50.0		80.0	50-200			

Matrix Spike Dup (2412002-MSD1) Source: E403140-04 Prepared: 03/18/24 Analyzed: 03/18/24

Diesel Range Organics (C10-C28)	235	25.0	250	ND	94.1	38-132	1.61	20	
Surrogate: n-Nonane	38.5		50.0		76.9	50-200			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 17 #20	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	3/20/2024 1:32:41PM

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 (2412021-BLK1)					Prepared: 03/18/24 Analyzed: 03/19/24				
Chloride	ND	20.0							
LCS (2412021-BS1)					Prepared: 03/18/24 Analyzed: 03/19/24				
Chloride	252	20.0	250		101	90-110			
LCS Dup (2412021-BSD1)					Prepared: 03/18/24 Analyzed: 03/19/24				
Chloride	251	20.0	250		100	90-110	0.512	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

Ensolum, LLC	Project Name:	RDX 17 #20	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	03/20/24 13:32

- 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: Ensolum

[illegible][illegible]

Additional Instructions: Please CC: [cburton@ensolum.com](mailto:cburton@ensolum.com), [agiovento@ensolum.com](mailto:agiovento@ensolum.com), [jim.raley@dvn.com](mailto:jim.raley@dvn.com), [chamilton@ensolum.com](mailto:chamilton@ensolum.com), [iestrella@ensolum.com](mailto:iestrella@ensolum.com)

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: Israel Estrella

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 3/14/24	Time 9:15	Received by: (Signature) <i>[Signature]</i>	Date 3-14-24	Time 0915	Lab Use Only Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N
Relinquished by: (Signature) <i>[Signature]</i>	Date 3-14-24	Time 1530	Received by: (Signature) <i>[Signature]</i>	Date 3/15/24	Time 0645	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 _____ T2 _____ T3 _____ 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: 3/15/2024 12:34:07PM

## 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: Ensolum, LLC  
 Phone: (575) 988-0055  
 Email: a.giovengo@ensolum.com

Date Received: 03/15/24 06:45  
 Date Logged In: 03/14/24 17:39  
 Due Date: 03/21/24 17:00 (4 day TAT)

Work Order ID: E403142  
 Logged In By: Alexa Michaels

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: CourierSample 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 InstructionComments/Resolution

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

Date



envirotech Inc.



## APPENDIX F

### NMOCD Notifications

---



**District I**

1625 N. French Dr., Hobbs, NM 88240  
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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 321968

**QUESTIONS**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 321968
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAB1706053151
Incident Name	NAB1706053151 RDX 17 FEDERAL COM #020H @ 30-015-41381
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-41381] RDX 17 FEDERAL COM #020H

**Location of Release Source**

Site Name	RDX 17 FEDERAL COM #020H
Date Release Discovered	02/10/2017
Surface Owner	Federal

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

What is the sampling surface area in square feet	400
What is the estimated number of samples that will be gathered	3
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/13/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Contact Ashley Giovengo 575-988-0055
Please provide any information necessary for navigation to sampling site	Location at 32.0489464° N, -103.8974533° W

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CONDITIONS  
  
Action 321968

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 321968
	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.	3/11/2024

**From:** [Maxwell, Ashley, EMNRD](#)  
**To:** [Raley, Jim](#)  
**Subject:** RE: [EXTERNAL] WPX Energy Extension Request - NAB1422341439  
**Date:** Friday, February 16, 2024 7:58:41 AM  
**Attachments:** [image001.png](#)

---

Good Morning Jim,

Your extension request for 90 days has been approved. Please submit a report via the OCD permitting portal by June 21, 2024.

**Ashley Maxwell** • Environmental Specialist  
Environmental Bureau Projects Group  
EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87110  
505.635.5000 | [Ashley.Maxwell@emnrd.nm.gov](mailto:Ashley.Maxwell@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMNRD Website prior to submitting any C-141s. The guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/> or <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

---

**From:** Raley, Jim <[Jim.Raley@dyn.com](mailto:Jim.Raley@dyn.com)>  
**Sent:** Thursday, February 15, 2024 12:15 PM  
**To:** Hamlet, Robert, EMNRD <[Robert.Hamlet@emnrd.nm.gov](mailto:Robert.Hamlet@emnrd.nm.gov)>  
**Subject:** [EXTERNAL] WPX Energy Extension Request - NAB1422341439

**CAUTION:** This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Robert,

WPX Energy is requesting an extension for incident# NAB1422341439 for the RDX 17-20H. This incident occurred on 7/30/2014.

The previous closure request was denied as a small area off pad was above the closure criteria. We anticipate excavating this small area, but cannot proceed without BLM sundry approval. We are still waiting on BLM to review the sundry application and give permission for equipment off pad.

Due to this delay in receiving landowners permission we ask for an additional 90 days to complete.

**Jim Raley** | Environmental Professional - Permian Basin  
5315 Buena Vista Dr., Carlsbad, NM 88220  
C: (575)689-7597 | [jim.ralej@dyn.com](mailto:jim.ralej@dyn.com)



Confidentiality Warning: This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system.

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QUESTIONS

Action 356608

QUESTIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:	246289
	Action Number:	356608
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1706053151
Incident Name	NAB1706053151 RDX 17 FEDERAL COM #020H @ 30-015-41381
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-41381] RDX 17 FEDERAL COM #020H

Location of Release Source	
Please answer all the questions in this group.	
Site Name	RDX 17 FEDERAL COM #020H
Date Release Discovered	02/10/2017
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	Cause:     Crude Oil   Released: 0 BBL   Recovered: 0 BBL   Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pump   Produced Water   Released: 400 BBL   Recovered: 100 BBL   Lost: 300 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 356608

**QUESTIONS (continued)**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:	246289
	Action Number:	356608
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
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.	

**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	Not answered.

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@dmn.com Date: 06/21/2024
--	--

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**Santa Fe, NM 87505**

QUESTIONS, Page 3

Action 356608

**QUESTIONS (continued)**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 356608
	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
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
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	Greater than 5 (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 500 and 1000 (ft.)
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
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.	
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)	3200
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	55.1
GRO+DRO	(EPA SW-846 Method 8015M)	55.1
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	09/27/2022
On what date will (or did) the final sampling or liner inspection occur	03/13/2024
On what date will (or was) the remediation complete(d)	03/13/2024
What is the estimated surface area (in square feet) that will be reclaimed	2707
What is the estimated volume (in cubic yards) that will be reclaimed	204
What is the estimated surface area (in square feet) that will be remediated	2707
What is the estimated volume (in cubic yards) that will be remediated	204

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 356608

**QUESTIONS (continued)**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:	246289
	Action Number:	356608
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS****Remediation Plan (continued)**

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.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> 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
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> 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.

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 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@dvsn.com Date: 06/21/2024
--	---

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 5  
  
Action 356608

QUESTIONS (continued)

Operator:  WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:  246289
	Action Number:  356608
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

<b>Deferral Requests Only</b>	
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

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QUESTIONS, Page 6

Action 356608

**QUESTIONS (continued)**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:
	246289
	Action Number:
	356608
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

**QUESTIONS**

<b>Sampling Event Information</b>	
Last sampling notification (C-141N) recorded	321968
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/13/2024
What was the (estimated) number of samples that were to be gathered	3
What was the sampling surface area in square feet	400

**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	2707
What was the total volume (cubic yards) remediated	204
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	2707
What was the total volume (in cubic yards) reclaimed	204
Summarize any additional remediation activities not included by answers (above)	Soil Removed

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@dmn.com Date: 06/21/2024
--	--

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QUESTIONS, Page 7  
  
Action 356608

QUESTIONS (continued)

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 356608
	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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State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

CONDITIONS

Action 356608

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID:
	246289
	Action Number:
	356608
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	7/23/2024
amaxwell	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	7/23/2024
amaxwell	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	7/23/2024