



CLOSURE REQUEST REPORT

Site Location:

**RDX 9-1
Eddy County, New Mexico
Incident Number:
nAB1728635377**

August 1, 2023
Ensolum Project No. 03A1987060

Prepared for:

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1.0 INTRODUCTION

Ensolum, LLC (Ensolum), on behalf of WPX Energy Permian, LLC (WPX), has prepared the following *Closure Request Report* (CRR) to document assessment, corrective actions performed to date, and subsequent soil sampling activities conducted on behalf of WPX at the RDX 9-1 (Site). Based on all remedial actions and results of the soil sampling events completed for the release of crude oil and produced water at the Site, WPX respectfully requests no further action (NFA) for Incident Number nAB1728635377.

1.1 Site Description

The Site is located in Unit P, Section 9, Township 26 South, Range 30 East, in Eddy County, New Mexico (**Figure 1**). The Site is associated with oil and gas production of Federal Land managed by the Bureau of Land Management (BLM).

1.2 Release Background

On October 2, 2017, a pressure gauge failed, which resulted in the release of approximately 10 barrels (bbls) of produced water and crude oil onto the caliche pad; approximately 1 bbl of fluid ran off-pad on the south side of the caliche pad. A vacuum truck was immediately dispatched to the Site and recovered 8 bbls of fluid. The incident was reported to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form (Form C-141) on October 6, 2017, and was subsequently assigned Incident Number nAB1728635377 (**Appendix A**).

1.3 Site Characterization

The Site was characterized for applicability of Table I, *Closure Criteria for Soils Impacted by a Release*, from Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the NMAC. Results from the characterization desktop review are presented on page 3 of Form C-141, Site Assessment/Characterization. Potential Site receptors are identified in **Figure 1**.

The New Mexico Office of the State Engineer (NMOSE) indicates the nearest data point with a depth to groundwater measurement indicates groundwater is greater than 55 feet below ground surface (bgs) and the water well, NMOSE file number well C-4655 (TW-1), is located approximately 0.22 miles south of the Site as shown in Figure 1. Soil boring TW-1 was installed on July 28, 2022, specifically to assess the depth to groundwater in this region and was determined groundwater is greater than 55 feet bgs, which reasonably determines depth to water beneath the Site. The well log and record are provided in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 680.2 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 any occupied residence, school, hospital, institution, church, and wetland and greater than 1,000 feet to a freshwater well or spring. The Site 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).

Based on the desktop review of nearby receptors and depth to groundwater determination at the Site, 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 Hydrocarbon (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

Per 19.15.29.13 NMAC, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the off-pad area that was impacted by the release.

2.0 INITIAL DELINEATION ACTIVITIES

2.1 Delineation Sampling

On November 11, 2022, 10 delineation potholes (PH01 through PH10) were advanced via mechanical equipment in the area surrounding the release to assess for the presence or absence of impacted soil. Ensolum directed delineation activities by field screening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. A minimum of two soil samples were collected from each delineation pothole location; the samples with the highest observed field screening and the terminus depth. The location of these delineation potholes were mapped utilizing a handheld Global Positioning System (GPS) unit and are shown on **Figures 2 and 3**. Field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs (**Appendix C**) and photographic documentation of delineation activities 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 LLC (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0.

2.2 Laboratory Analytical Results

Laboratory analytical results indicated there were three areas of concern (Area of Concern 1, Area of Concern 2, and Area of Concern 3) with delineation pothole samples that exceeded the strictest Closure Criteria. Sample locations PH01, PH09, and PH10 had chloride levels exceeding the reclamation requirement, however, all delineation samples were below the Closure Criteria for the Site. The initial delineation activities determined there was an absence of impacted soil related to the October 2017 release; however, waste-containing was documented within the release extent. Based on laboratory analytical results during the initial delineation activities, excavation of waste-containing within the three areas of concern appeared warranted.

Figure 2 summarizes delineation analytical results for Areas of Concern 1 and 2 and analytical results are presented on **Table 1**. **Figure 3** summarizes delineation analytical results for Area of Concern 3 and the analytical results are presented on **Table 2**. The analytical laboratory reports are included in **Appendix E**.

3.0 EXCAVATION AND CONFIRMATION SAMPLING

3.1 Excavation Activities

On March 27 and 28, 2023, Ensolum personnel oversaw the excavation of waste-containing soil in the three areas of concern. Following field screening indicating compliance with the Site

Closure Criteria and/or reclamation requirement, as applicable, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor of the excavation. 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.

Based on the presence of three excavations, the following confirmation floor and sidewall samples are associated with three areas of concern:

- Area of Concern 3 is represented by confirmation soils samples FS01 and FS02 and sidewall samples SW01 and SW02.
- Area of Concern 2 is represented by FS03 through FS22 and sidewall samples SW03 through SW08.
- Area of concern 1 is represented by confirmation floor samples FS23 through FS28 and sidewall samples SW09 through SW11

Excavation confirmation sample locations are depicted on **Figure 3**.

Laboratory analytical results indicated that sidewall sample SW01 exceeded the strictest Closure Criteria at 0-4 ft bgs and would require further excavation.

All samples were excavated in accordance with the reclamation requirement and all confirmation soil samples met the requirements set forth in 19.15.29.13 NMAC. The excavation soil samples were field screened, handled, and analyzed following the same procedures as described above.

3.2 Laboratory Analytical Results

Laboratory analytical results indicated all COCs were in compliance with the Closure Criteria and/or reclamation requirement for all confirmation soil samples with the exception of sidewall soil sample SW01. Sidewall soil sample SW01, collected along the sidewall of the excavation associated with Area of Concern, contained a TPH concentration exceeding the reclamation requirement. As a result, additional delineation and excavation appeared warranted.

Figure 3 depicts the soil analytical results for the three excavations. **Tables 3, 4 and 5** summarize laboratory analytical results for confirmation samples. The analytical laboratory reports are included in Appendix E.

4.0 ADDITIONAL DELINEATION AND EXCAVATION ACTIVITIES

4.1 Delineation and Excavation

Based on initial delineation potholing activities, three areas of concern were identified. Ensolum personnel oversaw the excavation and removal of waste-containing soil in all three areas and laboratory analytical results from final confirmation sampling indicated Area of Concern 3 still contained soil with elevated concentrations of TPH, specifically the sidewall associated with sidewall soil sample SW01. Beginning on April 20, 2023, 10 additional delineation potholes (PH01 through PH10) were advanced via mechanical equipment in the area surrounding the third excavation area. Samples were collected and transported to Envirotech Laboratory Analysis (Envirotech) and analyzed in the same manner previously described above. Delineation pothole locations are depicted on **Figure 4** and field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs (**Appendix C**).

Ensolum personnel returned to the Site on June 26, 2023, to oversee the excavation and removal of soils in confirmation sidewall sample location, SW01. An additional 1,196 yards were removed from the area of concern and final confirmation soil samples FS29 through FS53 and sidewall samples SW01 through SW06 were collected in locations shown in **Figure 5**.

The final excavation extent measured approximately 10,269 square feet. Approximately 2,428 yards of contaminated soil were removed. The impacted soil was transported and properly disposed of at the OWL Landfill Services LLC, Northern Delaware Basin Landfill. After completion of confirmation sampling, the excavation areas were secured with fencing. The off-pad excavation area will be backfilled and reseeded with a Bureau of Land Management (BLM) approved seed mixture in order to revegetate the off-pad area.

4.2 Laboratory Analytical Results

Laboratory analytical results associated with the additional delineation soil samples indicated additional waste-containing soil was present in the vicinity of Area of Concern 3. Based on the final excavation soil analytical results, all COC concentrations for floor samples and sidewall samples for Area of Concern 3 were in compliance with the applicable Site Closure Criteria and reclamation requirement (**Table 5**).

The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**. **Appendix F** provides correspondence email notification receipts associated with the subject releases.

5.0 CLOSURE REQUEST

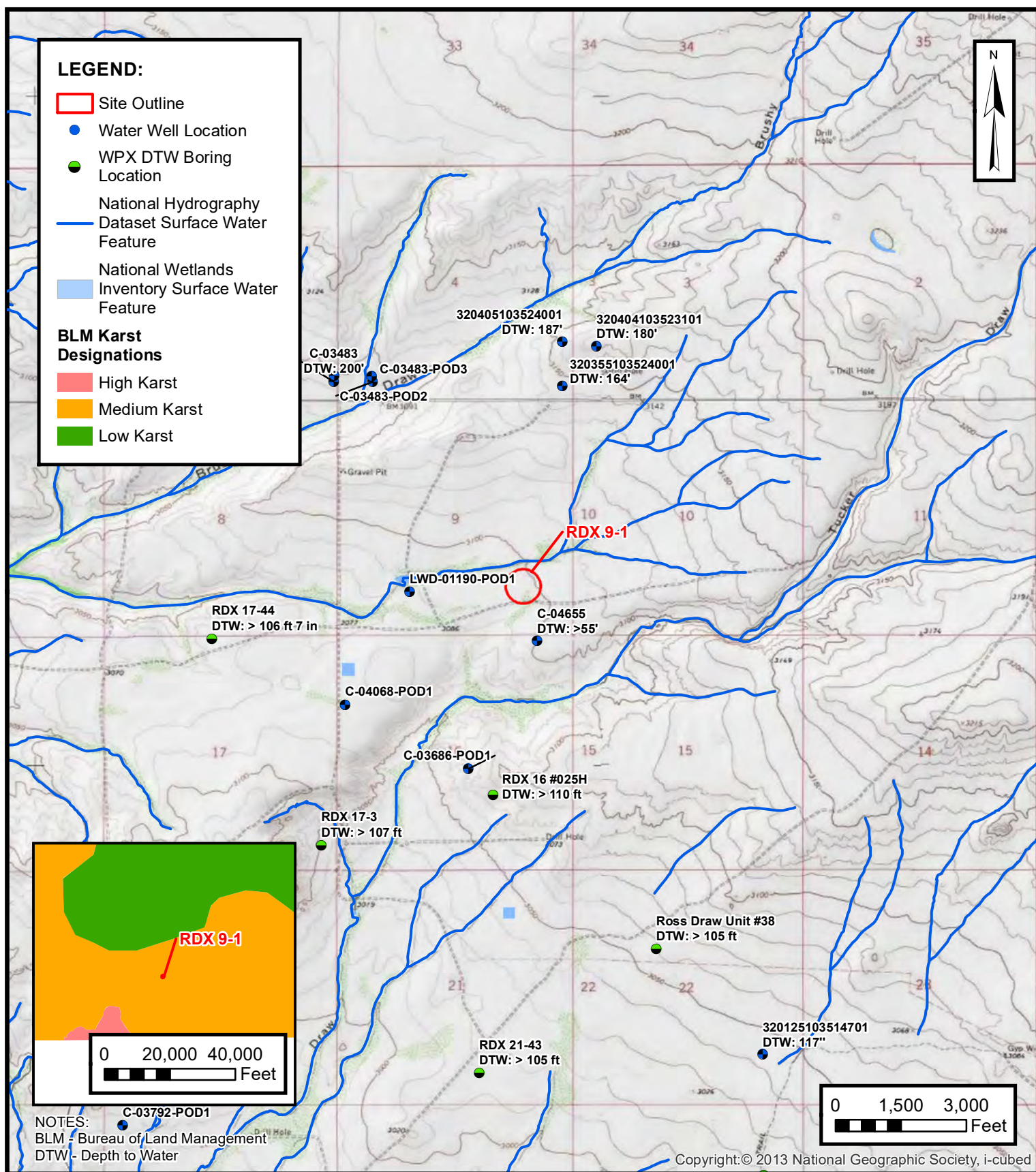
The primary objective of Ensolum's scope of service was to document remediation activities performed at the Site in accordance with the applicable NMOCD regulatory guidelines. Based on the results documented in this CRR, the following findings and conclusions regarding the subject release is presented:

- Laboratory analytical results for delineation soil samples from initial delineation potholes PH04 through PH08 were in compliance with the Site Closure Criteria, thus provide confirmation for the lateral delineation of soil impacts;
- All soil samples were compliant with the Closure Criteria, but waste-containing soil was documented in the top 4 feet of soil in selective areas associated with Areas of Concern 3;
- Laboratory analytical results for all final excavation confirmation soil samples indicated all COC concentrations were below the applicable Site Closure Criteria and reclamation requirement, confirming all waste-containing soil had been removed from the top 4 feet of the Site.

Based on the conclusions presented, WPX believes the remediation activities described above have met the requirements set forth in NMAC 19.15.29.13 to be protective of human health, the environment, and groundwater. As such, WPX respectfully requests closure of Incident Number nAB1728635377.



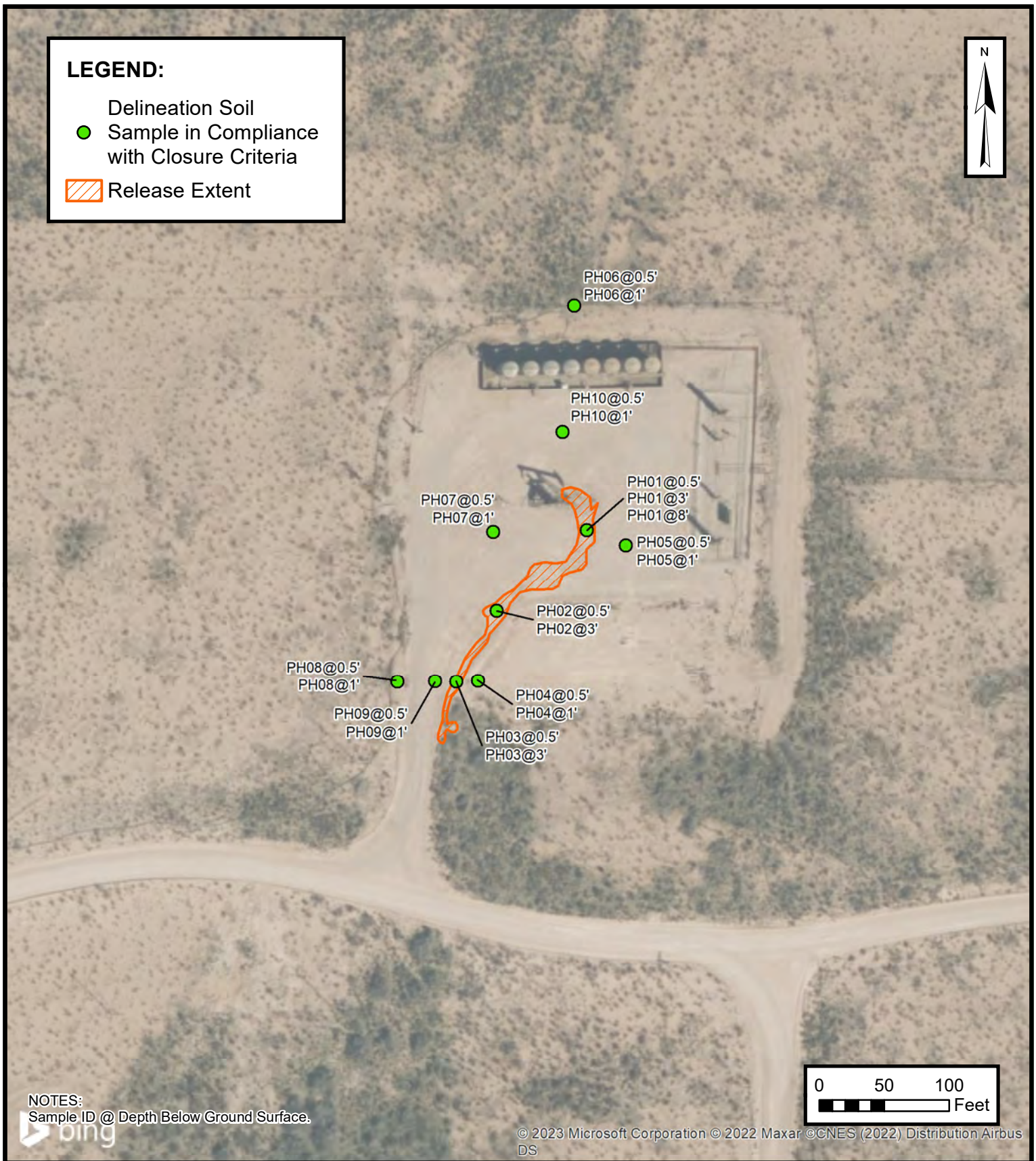
Figures



SITE MAP

WPX ENERGY PERMIAN, LLC
RDX 9-1
Incident Number: NAB1728635377
Unit P Sec 9 T26S R30E
Eddy County, New Mexico

FIGURE
1



DELINEATION SOIL SAMPLE LOCATIONS

WPX ENERGY PERMIAN, LLC

RDX 9-1

Incident Number: NAB1728635377

Unit P Sec 9 T26S R30E

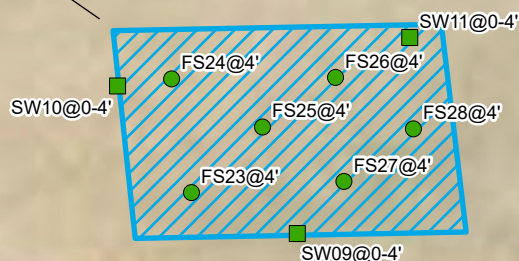
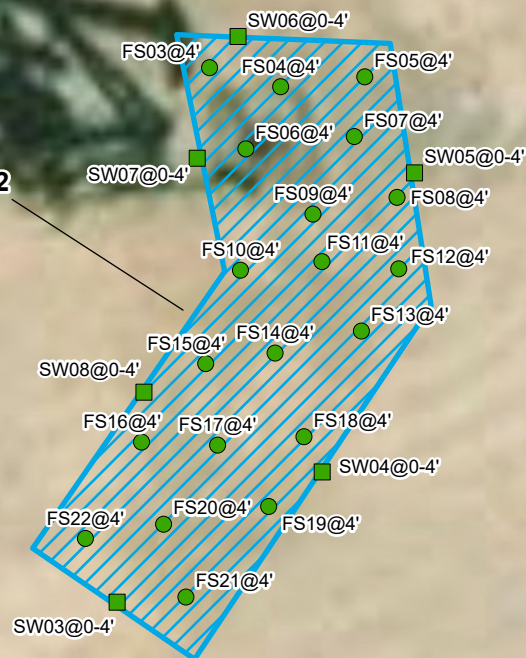
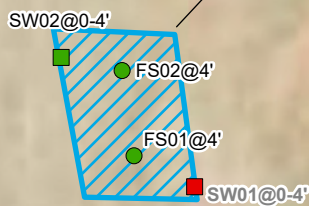
Eddy County, New Mexico

FIGURE

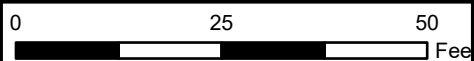
2

Legend

- Excavation Floor Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample with Concentrations Exceeding Closure Criteria
- ▨ Excavation Extent

Area of Concern 1**Area of Concern 2****Area of Concern 3**

Notes:
 Sample ID @ Depth Below Ground/Surface.
 Samples in bold indicate samples exceeds closure criteria.



Sources: Environmental Systems Research Institute (ESRI)

**Excavation Soil Sample Locations**

WPX Energy Permian, LLC

RDX 9-1

Incident Number: nAB1728635377

Unit P Sec 29 T26S R30E

Eddy County, New Mexico

FIGURE**3**

Legend

- Delineation Soil Sample
in Compliance with
Closure Criteria
- ▨ Proposed Excavation
Extent

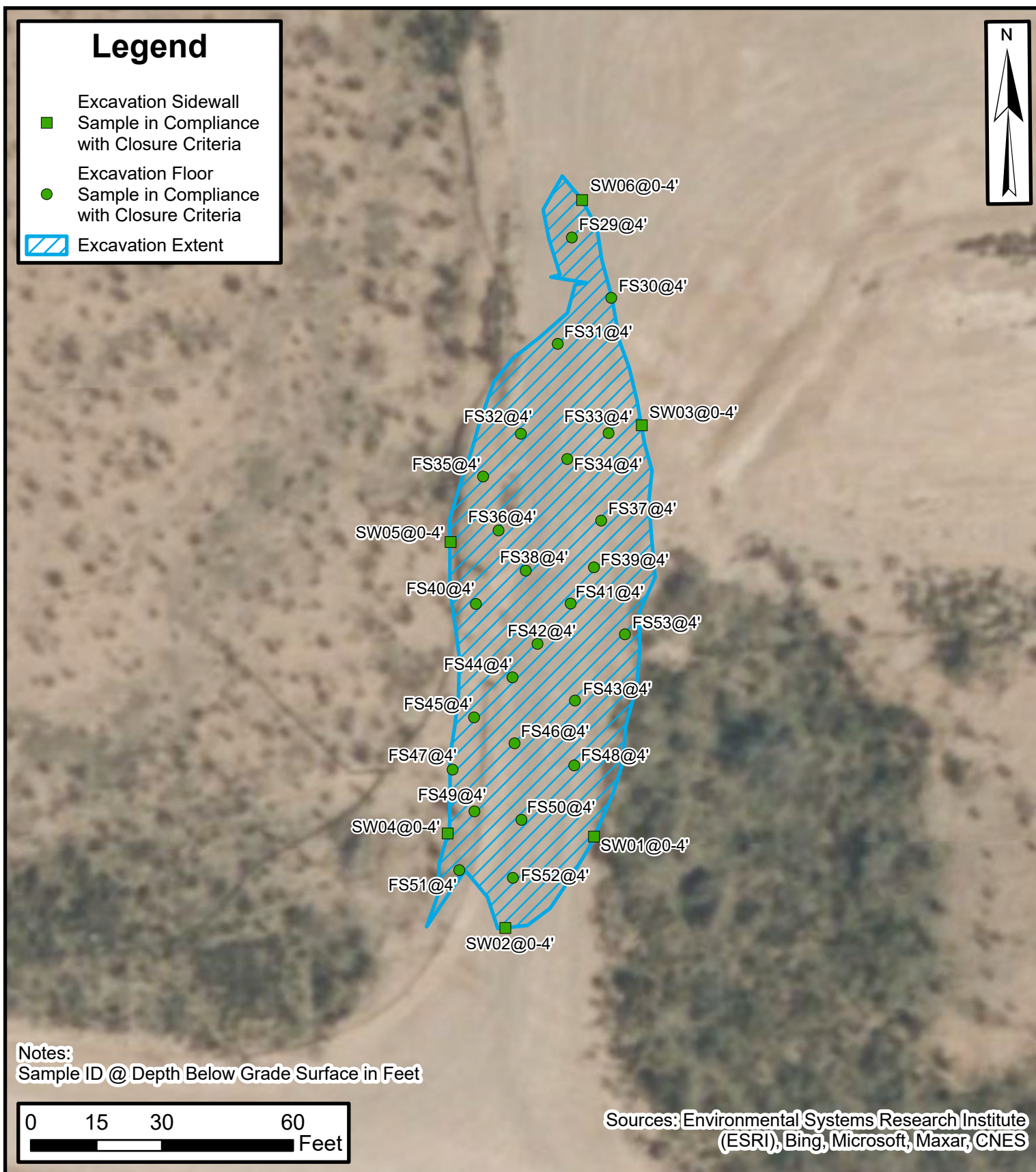


Delineation Soil Sample Locations (Area of Concern 3)

WPX Energy Permian, LLC
RDX 9-1

Incident Number: NAB1728635377
Unit P, Sec. 9, T 26S, R 30E
Eddy County, New Mexico

**FIGURE
4**





Tables



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Sample Analytical Results (Area of Concern 1 & 2)										
PH01	11/11/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,210
PH01	11/11/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	2,320
PH01	11/11/2022	8	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	399
PH02	11/11/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	281
PH02	11/11/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	370
PH03	11/11/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	24.7
PH03	11/11/2022	3	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	454
PH04	11/11/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	16.6
PH04	11/11/2022	1	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	16.7
PH05	11/11/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	182
PH05	11/11/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	207
PH06	11/11/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	22.3
PH06	11/11/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	12.3
PH07	11/11/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	15.5
PH07	11/11/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	15.4
PH08	11/11/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	13.6
PH08	11/11/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	15
PH09	11/11/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,080
PH09	11/11/2022	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,400
PH10	11/11/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,030
PH10	11/11/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,800

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Grey text represents samples that have been excavated

<": Laboratory Analytical result is less than reporting limit

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

* Indicates sample was collected in area to be reclaimed after remediation is complete; reclamation for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Sample Analytical Results (Area of Concern 3)										
PH01	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	788
PH01B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<25.0
PH02	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	101
PH02B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1780
PH02D	4/20/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1550
PH02F	4/20/2023	6	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	110
PH03	5/9/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1510
PH03	5/9/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1440
PH04	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	3140
PH04A	4/20/2023	2.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	673
PH04C	4/20/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	268
PH05	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<25.0
PH05B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<25.0
PH05D	4/20/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	105

Notes:

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mg/kg: milligrams per kilogram

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

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GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Sample Analytical Results (Area of Concern 3) Cont'd										
PH06	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<25.0
PH06B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<25.0
PH06D	4/20/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	80.3
PH07	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	268
PH07B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,830
PH07D	4/20/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,980
PH07F	4/20/2023	6	<0.0250	<0.0500	<20.0	58.2	65.7	58.2	123.9	1,360
PH07H	4/20/2023	8	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,260
PH07K	4/20/2023	11	<0.0250	<0.0500	<20.0	86.7	<50.0	86.7	86.7	1,600
PH08	4/20/2023	0	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	25.5
PH08B	4/20/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	540
PH09	5/9/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	565
PH09	5/9/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	237
PH10	5/9/2023	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	878
PH10	5/9/2023	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	395

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Grey text represents samples that have been excavated

<": Laboratory Analytical result is less than reporting limit

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

* Indicates sample was collected in area to be reclaimed after remediation is complete; reclamation for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results (Area of Concern 1)										
FS23	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	788
FS24	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	801
FS25	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	774
FS26	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,390
FS27	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,400
FS28	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,400
SW09	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	200
SW10	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	179
SW11	03/28/2023	0-4	<0.00199	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	114

Notes:

bgs: below ground surface

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<": Laboratory Analytical result is less than reporting limit

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

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TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results (Area of Concern 2)										
FS03	03/27/2023	4	<0.0250	<0.0250	<20.0	57.1	79.6	57	136.7	4,880
FS04	03/27/2023	4	<0.0250	<0.0250	<20.0	42.7	87.3	42.7	130	4,870
FS05	03/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	3,660
FS06	03/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	3,990
FS07	03/27/2023	4	<0.0250	<0.0250	<20.0	41.8	63.5	42	105.3	4,180
FS08	03/27/2023	4	<0.0250	<0.0250	<20.0	117	121.0	117	242	4,820
FS09	03/27/2023	4	<0.0250	<0.0250	<20.0	75.4	96.5	75	171.9	5,210
FS10	03/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,200
FS11	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	3,050
FS12	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	2,830
FS13	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	2,870
FS14	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,350
FS15	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	65.5
FS16	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	627
FS17	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	881

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 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results (Area of Concern 2) Cont'd										
FS18	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	2,760
FS19	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	306
FS20	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	321
FS21	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	289
FS22	03/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	342
SW03	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	45.8
SW04	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	44.3
SW05	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	209
SW06	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	223
SW07	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	204
SW08	03/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	42.7

Notes:

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BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS
 WPX Energy Permian, LLC
 RDX 9-1
 Eddy County, New Mexico

Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results (Area of Concern 3)										
FS01	03/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,490
FS02	03/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,640
SW01	03/27/2023	0-4	<0.0250	<0.0250	<20.0	112	<50.0	112	112	378
SW02	03/27/2023	0-4	<0.0250	<0.0250	<20.0	93.6	<50.0	93.6	93.6	332
FS29	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	105
FS30	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	104
FS31	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	873
FS32	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	340
FS33	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	408
FS34	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	563
FS35	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	318
FS36	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	713
FS37	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,800
FS38	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,260
FS39	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	227
FS40	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	510
FS41	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,990
FS42	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	467
FS43	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	6,290

Notes:

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Sample Designation	Date	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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results (Area of Concern 3) Cont'd										
FS44	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	629
FS45	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,020
FS46	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	224
FS47	06/27/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	128
FS48	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	364
FS49	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	176
FS50	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	329
FS51	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	581
FS52	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,070
FS53	06/28/2023	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	1,120
SW01	06/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	349
SW02	06/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	274
SW03	06/27/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	38.8
SW04	06/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	37.1
SW05	06/28/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	59.5
SW06	06/27/2023	0-4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<50.0	<50.0	586

Notes:

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BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



APPENDIX A

C-141 Forms

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

ARTESIA DISTRICT

State of New Mexico

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141

Revised April 3, 2017

OCT 06 2017

Energy Minerals and Natural Resources

OCT 06 2017

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

RECEIVED

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

RECEIVED

Release Notification and Corrective Action

DAB17281035377

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: RKI Exploration / WPX Energy 246289

Contact: Karolina Blaney

Address: 5315 Buena Vista Dr.

Telephone No. 970 589 0743

Facility Name: RDX 9-1

Facility Type: Well Pad

Surface Owner: Federal

Mineral Owner: Federal

API No. 30-015-36211

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	9	26S	30E	990	FSL	990	FEL	Eddy

Latitude: 32.05262365_ Longitude -103.8808775 NAD83

NATURE OF RELEASE

Type of Release: Produced Water and Oil	Volume of Release: 10 bbls	Volume Recovered 8 bbls
Source of Release: flowline	Date and Hour of Occurrence 10/2/17	Date and Hour of Discovery 10/2/2017 at 15:15
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 9/30/17 at 20:30	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

The cause is equipment failure; pressure gauge on the tubing failed and ~10 bbls of produced water and oil were spilled on location. A small volume (~1bbl) left the location. The spill was immediately recovered with a vac truck.

Describe Area Affected and Cleanup Action Taken.*

The impacted area was immediately mapped with a Trimble to delineate the horizontal extent of the impacts. The line locates were completed and the impacted area will be scraped off and sampled for TPH, BTEX and Chlorides. Further remediation will be based on the sampling results.

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>	OIL CONSERVATION DIVISION		
Printed Name: Karolina Blaney	Approved by Environmental Specialist: <i>Crystal Weaver</i>		
Title: Environmental Specialist	Approval Date: 10/12/17	Expiration Date: NIA	
E-mail Address: Karolina.blaney@wpxenergy.com	Conditions of Approval: <i>see attached</i>		Attached <i>APP-4440</i>
Date: 10/6/17	Phone: 970 589 0743		

* Attach Additional Sheets If Necessary

Incident ID	nAB1728635377
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>>55</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input 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	nAB1728635377
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: James Raley

Title: Environmental Specialist

Signature: _____

Date: 6/30/2023

email: jim.raley@dm.com

Telephone: 575-689-7597

OCD Only

Received by: Shelly Wells

Date: 8/2/2023

Incident ID	nAB1728635377
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: James Raley Title: Environmental Specialist

Signature: _____ Date: 6/30/2023

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

OCD Only

Received by: Shelly Wells Date: 8/2/2023

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

Closure Criteria Support Documents



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSC 011 900 8 2022-01-01

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO. N/A		OSE FILE NO(S). C-4655			
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-748-1838			
	WELL OWNER MAILING ADDRESS 6488 7 Rivers Hwy				CITY Artesia	STATE NM	ZIP 88210	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 2	SECONDS 58.26	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	52	48.37	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW NE NE Sec.16 T26S R30E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 7/28/2022	DRILLING ENDED 7/28/2022	DEPTH OF COMPLETED WELL (FT) Temporary Well		BORE HOLE DEPTH (FT) ±55	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	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	DATE STATIC MEASURED 7/28/22, 8/2/22		
	DRILLING FLUID: <input 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					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	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 (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	55	±6.5	Boring-HSA	--	--	--	--
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	


FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. C-4655	POD NO. 1	TRN NO. 729332
LOCATION 26S-30E-16-1-2-2	WELL TAG ID NO. —	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	4	4	Sand, Fine-grained, poorly graded, Brown	Y ✓ N	
	4	48	44	Sand, Fine-grained, poorly graded, with caliche Tan and white	Y ✓ N	
	48	55	7	Sand, Fine-grained, poorly graded, Tan Brown	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION: Temporary well material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface. USE OF PLS 8 2022 04/10/17	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt	

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNED NAME	Jackie D. Atkins 8/4/2022 DATE

FOR USE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. C-4655	POD NO. 1	TRN NO. 729332
LOCATION 265.30E.16.1.2.2.	WELL TAG ID NO.	PAGE 2 OF 2



2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

August 4, 2022

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4655 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, C-4655 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton


Enclosures: as noted above


052 Q77 AUG 0 2022 4:40 PM





APPENDIX C


Lithologic Soil Sample Logs


								Sample Name: PH01		Date: 11/11/2022					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Edyte Konan		Method: Backhoe					
Coordinates: 32.052208, -103.881018								Hole Diameter: ~3 ft		Total Depth: 8 ft bgs					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
Dry	1528.8	0	N	PH01	0.5	0	SP/SM	SAND, brown, verfy fine to fine							
						1	SAA	SAA							
Dry	2234.6	0	N	PH01	2	2	SAA	SAA							
						3									
Moist	2872.8	0	N	PH01	4	4	SW/SM	SAND, tan, fine to coarse, little gravel							
						5									
Moist	1646.4	0	N	PH01	6	6	SAA	SAA							
						7									
Moist	414.4	0	N	PH01	8	8	SAA	SAA							
								TD at 8 ft bgs							


								Sample Name: PH02		Date: 11/11/2022					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Edyte Konan		Method: Backhoe					
Coordinates: 32.052234,-103.881084								Hole Diameter: ~3 ft		Total Depth: 3 ft bgs					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
						0									
Dry	280	0.1	N	PH02	0.5	0.5	SP/SM	SAND, brown, very fine to fine, little silt							
Dry	246.4	0.1	N	PH02	1	1	SAA	SAA							
						2									
Moist	246.4	0	N	PH02	3	3	SAA	SAA							
								TD at 3 ft bgs							


 ENSOLUM		Sample Name: PH03		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.052239, -103.881221			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 3 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	ND	0	N	PH03	0.5	0.5	SP/SM	SAND, brown, very fine to fine, little silt
Dry	ND	0	N	PH03	1	1	SAA	SAA
						2		
Moist	364	0	N	PH03	3	3	SAA	SAA
								TD at 3 ft bgs


 ENSOLUM		Sample Name: PH04		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.052222,-103.881180			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	0	N	PH04	0.5	0.5	SP/SM	SAND, dark brown, very fine to fine, little silt
Dry	ND	0	N	PH04	1	1	SAA	SAA
TD at 1 ft bgs								


		Sample Name: PH05		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.052567, -103.880732			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	0	N	PH05	0.5	0.5	SW/SM	SAND, tan, fine to coarse
Dry	201	0	N	PH05	1	1	SAA	SAA
TD at 1 ft bgs								


								Sample Name: PH06		Date: 11/11/2022					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Edyte Konan		Method: Backhoe					
Coordinates: 32.053042, -103.880914								Hole Diameter: ~3 ft		Total Depth: 1 ft bgs					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
Dry	ND	0	N	PH06	0.5	0.5	SP/SM	SAND, brown, fine to coarse, little gravel							
Dry	ND	0	N	PH06	1	1	SAA	SAA							
								TD at 1 ft bgs							


		Sample Name: PH07		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.0525653, -103.881160			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	0	N	PH07	0.5	0.5	SW/SM	SAND, tan, fine to coarse
Dry	ND	0	N	PH07	1	1	SAA	SAA
TD at 1 ft bgs								


		Sample Name: PH08		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.052261,-103.881342			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	0	N	PH08	0.5	0.5	SP/SM	SAND, brown, very fine to fine
Dry	ND	0	N	PH08	1	1	SAA	SAA
TD at 1 ft bgs								


		Sample Name: PH09		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.05224, -103.881280			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	868	0	N	PH09	0.5	0.5	SW/SM	SAND, tan, fine to coarse
Dry	1215.2	0	N	PH09	1	1	SAA	SAA
TD at 1 ft bgs								


		Sample Name: PH010		Date: 11/11/2022				
		Site Name: RDX 9-1						
		Incident Number: nAB1728635377						
		Job Number: 03A1987060						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.0527765, -103.8809376			Logged By: Edyte Konan		Method: Backhoe			
			Hole Diameter: ~3 ft		Total Depth: 1n ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	892.8	0	N	PH10	0.5	0	SW/SM	SAND, tan, fine to coarse
Dry	1893	0	N	PH10	1	1	SAA	SAA
TD at 1 ft bgs								


								Sample Name: PH01		Date: 4/20/23					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Backhoe					
Coordinates: 32.052096, -103.881213								Hole Diameter: ~3'		Total Depth: 3'					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
Dry	795	0.2	N	PH01	0	0	SP-SM	SAND, light brown-brown, poorly graded, small amounts of limestone gravel, no odor							
Dry	<173	0.2	N	PH01A	1	1	SP-SM	SAA							
Dry	<173	0.6	N	PH01B	2	2	SP-SM	SAND, medium brown, poorly graded, noncohesive, no odor, low plasticity							
Dry	<173	0.6	N	PH01C	3	3	SP-SM	SAA							
								TD at 3 ft bgs							


								Sample Name: PH02		Date: 4/20/23			
								Site Name: RDX 9-1					
								Incident Number: nAB1728635377					
								Job Number: 03A1987060					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Backhoe			
Coordinates: 32.052373, -103.881213								Hole Diameter: ~3'		Total Depth: 6'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
Dry	324	2.1	Y	PH02	0	0	SP-SM	SAND, noncohesive, tan, small amounts of gravel, poorly graded, staining					
Dry	1864	2.0	N	PH02A	1	1	SP-SM	SAND, noncohesive, tan, poorly graded, no odor, no staining					
Moist	1741	2.5	N	PH02B	2	2	SP-SM	SAA					
Moist	1993	1.9	N	PH02C	3	3	SP-SM	SAA					
Moist	1310	0.8	N	PH02D	4	4	SP-SM	SAA					
Moist	324	0.2	N	PH02E	5	5	SP-SM	SAND, brown-dark brown, light plasticity, poorly graded, no odor, no staining					
Moist	<173	0.2	N	PH02F	6	6	SP-SM	SAA					
								TD at 6 ft bgs					


								Sample Name: PH03		Date: 5/9/23	
								Site Name: RDX 9-1			
								Incident Number: nAB1728635377			
								Job Number: 03A1987060			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CB		Method: Backhoe	
Coordinates: 32.05239, -103.88126								Hole Diameter: 3'		Total Depth: 4'	
Comments: Field screening conducted with titration method. Chloride test performed with 1:1 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry			Y	PH03	0	0	CCHE	Caliche, noncohesive, tan, small amounts of gravel, poorly graded			
Dry	450		N	PH03	1	1	SP-SM	SAND, noncohesive, tan, poorly graded, no odor, no staining			
Dry	1200		N	PH03	2	2	SP-SM	SAA			
Dry	1500		N	PH03	3	3	SP-SM	SAA			
Dry	1350		N	PH03	4	4	SP-SM	SAA			
Total Depth 4'											


								Sample Name: PH04		Date: 4/20/23					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Backhoe					
Coordinates: 32.051918, -103.881372								Hole Diameter: ~3'		Total Depth: 4'					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
Dry	2912	3.1	Y	PH04	0	0	SP-SM	SAND, odor, medium brown, noncohesive, small amounts of gravel, poorly graded							
						1									
						2									
Moist	638	1.7	N	PH04A	2.5	2.5	SP-SM	SAND, no odor, dark brown, noncohesive, no staining, poorly graded							
Moist	291	0.8	N	PH04B	3	3	SP-SM	SAA							
Moist	291	0.6	N	PH04C	4	4	SP-SM	SAA							
								TD at 4 ft bgs							


					Sample Name: PH05		Date: 4/20/23	
					Site Name: RDX 9-1			
					Incident Number: nAB1728635377			
					Job Number: 03A1987060			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ronni Hayes		Method: Backhoe	
Coordinates: 32.052005, -103.881419					Hole Diameter: ~3'		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<173	0.4	N	PH05	0	0	SP-SM	SAND, noncohesive, no staining, no odor, dark brown, small amounts of gravel, poor grading
Dry	<173	1.2	N	PH05A	1	1	SP-SM	SAND, noncohesive, no staining, no odor, dark brown, poorly graded
Dry	<173	0.3	N	PH05B	2	2	SP-SM	SAA
Dry	<173	0.7	N	PH05C	3	3	SP-SM	SAND, noncohesive, no staining, no odor, light tan, poorly graded, some limestone gravel
Dry	184	0.4	N	PH05D	4	4	SP-SM	SAA
TD at 4 ft bgs								

					Sample Name: PH06		Date: 4/20/23	
					Site Name: RDX 9-1			
					Incident Number: nAB1728635377			
					Job Number: 03A1987060			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Ronni Hayes		Method: Backhoe	
Coordinates: 32.052176, -103.881193					Hole Diameter: ~3'		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<173	2.1	N	PH06	0	0	SP-SM	SAND, noncohesive, no staining, no odor, dark brown, small amounts of gravel, poor grading
Dry	<173	4.3	N	PH06A	1	1	SP-SM	SAND, noncohesive, no staining, no odor, dark brown, poorly graded
Dry	<173	1.8	N	PH06B	2	2	SP-SM	SAA
Dry	<173	0.8	N	PH06C	3	3	SP-SM	SAND, noncohesive, no staining, no odor, light tan, poorly graded, some limestone gravel
Dry	<173	0.9	N	PH06D	4	4	SP-SM	SAA
TD at 4 ft bgs								

								Sample Name: PH07		Date: 4/20/23	
								Site Name: RDX 9-1			
								Incident Number: nAB1728635377			
								Job Number: 03A1987060			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Backhoe	
Coordinates: 32.052297, -103.881146								Hole Diameter: ~3'		Total Depth: 11'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Dry	252	0.8	N	PH07	0	0	SP-SM	SAND, noncohesive, tan, small amounts of gravel, poorly graded,			
Dry	2077	1.4	N	PH07A	1	1	SP-SM	SAND, noncohesive, tan-light brown, poorly graded, odor, no staining			
Moist	2542	0.8	N	PH07B	2	2	SP-SM	SAA			
Moist	2223	1.0	N	PH07C	3	3	SP-SM	SAA			
Moist	1691	0.9	N	PH07D	4	4	SP-SM	SAA			
Moist	1943	0.7	N	PH07E	5	5	SP-SM	SAND, pale tan, low plasticity, poorly graded, odor, no staining, limestone gravel			
Moist	1467	0.1	N	PH07F	6	6	SP-SM	SAA			
Moist	1814	0.2	N	PH07G	7	7	SP-SM	SAA			
Moist	840	0.1	N	PH07H	8	8	SP-SM	SAND, pale tan, poorly graded, no staining, no odor, small amount of limestone gravel			
Moist	918	0.3	N	PH07I	9	9	SP-SM	SAA			
Moist	705	0.5	N	PH07J	10	10	SP-SM	SAA			
Moist	996	5.4	N	PH07K	11	11	SP-SM	SAND, pale tan, poorly graded, no staining, no odor, large amount of limestone gravel TD at 11 ft bgs			

								Sample Name: PH08		Date: 4/20/23					
								Site Name: RDX 9-1							
								Incident Number: nAB1728635377							
								Job Number: 03A1987060							
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Backhoe					
Coordinates: 32.052189, -103.881384								Hole Diameter: ~3'		Total Depth: 3'					
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.															
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions							
Dry	<173	1.0	N	PH01	0	0	SP-SM	SAND, light-medium brown, poorly graded, noncohesive, no odor, low plasticity							
Dry	<173	0.7	N	PH01A	1	1	SP-SM	SAA							
Dry	<173	0.3	N	PH01B	2	2	SP-SM	SAA							
Dry	<173	0.8	N	PH01C	3	3	SP-SM	SAND, tan-light brown, poorly graded, noncohesive, no odor, some limestone gravel							
TD at 3 ft bgs															

									Sample Name: PH09	Date: 5/9/23
									Site Name: RDX 9-1	
									Incident Number: nAB1728635377	
									Job Number: 03A1987060	
LITHOLOGIC / SOIL SAMPLING LOG									Logged By: CB	Method: Backhoe
Coordinates: 32.05244, -103.88128									Hole Diameter: 3'	Total Depth: 4'
Comments: Field screening conducted with titration method. Chloride test performed with 1:1 dilution factor of soil to distilled water. 40% correction factor included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
Dry			Y	PH09	0	0	CCHE	Caliche, noncohesive, tan, small amounts of gravel, poorly graded		
Dry	400		N	PH09	1	1	SP-SM	SAND, noncohesive, tan, poorly graded, no odor, no staining		
Dry	500		N	PH09	2	2	SP-SM	SAA		
Dry	400		N	PH09	3	3	SP-SM	SAA		
Dry	350		N	PH09	4	4	SP-SM	SAA		
						Total Depth 4'				

								Sample Name: PH10		Date: 5/9/23			
								Site Name: RDX 9-1					
								Incident Number: nAB1728635377					
								Job Number: 03A1987060					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CB		Method: Backhoe			
Coordinates: 32.05230, -103.88122								Hole Diameter: 3'		Total Depth: 4'			
Comments: Field screening conducted with titration method. Chloride test performed with 1:1 dilution factor of soil to distilled water. 40% correction factor included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
Dry			Y	PH10	0	0	CCHE	Caliche, noncohesive, tan, small amounts of gravel, poorly graded					
Dry	800		N	PH10	1	1	SP-SM	SAND, noncohesive, tan, poorly graded, no odor, no staining					
Dry	900		N	PH10	2	2	SP-SM	SAA					
Dry	600		N	PH10	3	3	SP-SM	SAA					
Dry	400		N	PH10	4	4	SP-SM	SAA					
						Total Depth 4'							



APPENDIX D

Photographic Log



Photographic Log

WPX Energy Permian, LLC

RDX 9-1

Incident Number nAB1728635377



Photograph 1

Date: 10/02/2017

Description: Initial Spill

View: N/A



Photograph 2

Date: 10/02/2017

Description: Initial Spill

View: North



Photograph 3

Date: 10/03/2017

Description: Initial Spill

View: West



Photograph 4

Date: 10/03/2017

Description: Initial Spill

View: North



Photographic Log

WPX Energy Permian, LLC

RDX 9-1

Incident Number nAB1728635377



Photograph 5

Date: 10/03/2017

Description: Initail Release

View: East



Scanned with CamScanner

Photograph 6

Date: 11/11/2022

Description: Delineation

View: Northeast



Photograph 7

Date: 04/14/2023

Description: Excavation - Southwest corner

View: South



Photograph 8

Date: 04/18/2023

Description: Excavation - Southwest corner

View: South

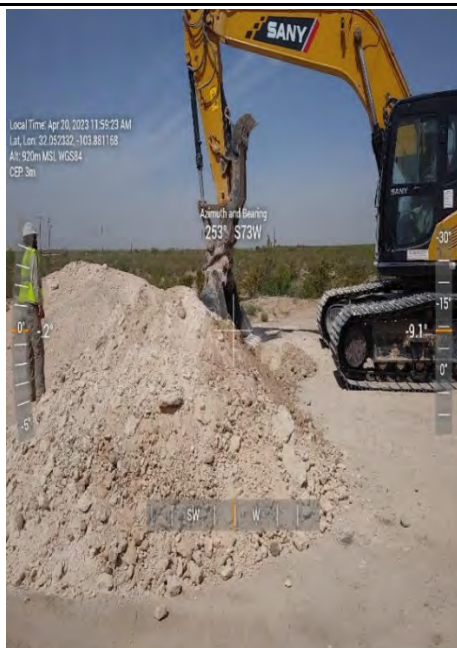


Photographic Log

WPX Energy Permian, LLC

RDX 9-1

Incident Number nAB1728635377



Photograph 9

Date: 04/20/2023

Description: Delineation

View: West



Photograph 10

Date: 06/26/2023

Description: Excavation

View: South



Photograph 11

Date: 06/27/2023

Description: Excavation

View: South



Photograph 12

Date: 06/28/2023

Description: Post excavation

View: South



APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/23/2022 1:44:32 PM

JOB DESCRIPTION

RDX 9-1
SDG NUMBER Rural Eddy NM

JOB NUMBER

890-3449-1

Client: Ensolum
Project/Site: RDX 9-1

Laboratory Job ID: 890-3449-1
SDG: Rural Eddy NM

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Definitions/Glossary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Job ID: 890-3449-1

Laboratory: Eurofins Carlsbad

Narrative	Job Narrative 890-3449-1
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Receipt

The sample was received on 11/14/2022 8:13 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3449-1).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-39841 and analytical batch 880-40174 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-39730 and analytical batch 880-39984 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-39709 and analytical batch 880-40017 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Client Sample ID: PH01

Lab Sample ID: 890-3449-1

Date Collected: 11/11/22 10:25

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 8

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		11/17/22 15:04	11/22/22 20:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 20:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 20:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 20:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 20:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	11/17/22 15:04	11/22/22 20:16	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/17/22 15:04	11/22/22 20:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 10:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:49	11/20/22 18:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:49	11/20/22 18:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:49	11/20/22 18:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	11/16/22 13:49	11/20/22 18:35	1
o-Terphenyl	92		70 - 130	11/16/22 13:49	11/20/22 18:35	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	399		4.99		mg/Kg			11/20/22 19:26	1

Eurofins Carlsbad

Surrogate Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3446-A-1-D MS	Matrix Spike	101	107
890-3446-A-1-E MSD	Matrix Spike Duplicate	98	109
890-3449-1	PH01	95	101
LCS 880-39841/1-A	Lab Control Sample	87	100
LCSD 880-39841/2-A	Lab Control Sample Dup	89	101
MB 880-39841/5-A	Method Blank	79	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-21514-A-1-E MS	Matrix Spike	90	74
880-21514-A-1-F MSD	Matrix Spike Duplicate	90	86
890-3449-1	PH01	96	92
LCS 880-39730/2-A	Lab Control Sample	104	109
LCSD 880-39730/3-A	Lab Control Sample Dup	97	105
MB 880-39730/1-A	Method Blank	102	104

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39841/5-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	11/17/22 15:04	11/22/22 11:43	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/17/22 15:04	11/22/22 11:43	1

Lab Sample ID: LCS 880-39841/1-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.06882	*-	mg/Kg		69	70 - 130
Toluene	0.100	0.08552		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08348		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1521		mg/Kg		76	70 - 130
o-Xylene	0.100	0.07434		mg/Kg		74	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-39841/2-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07231		mg/Kg		72	70 - 130	5	35
Toluene	0.100	0.08620		mg/Kg		86	70 - 130	1	35
Ethylbenzene	0.100	0.08808		mg/Kg		88	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1599		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.07844		mg/Kg		78	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U *-	0.0996	0.08639		mg/Kg		87	70 - 130
Toluene	<0.00201	U	0.0996	0.1074		mg/Kg		108	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0996	0.1063		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1903		mg/Kg		95	70 - 130
o-Xylene	<0.00201	U	0.0996	0.09294		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-3446-A-1-E MSD

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *	0.0990	0.08751		mg/Kg		88	70 - 130	1	35
Toluene	<0.00201	U	0.0990	0.1051		mg/Kg		106	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0990	0.1021		mg/Kg		103	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1827		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08849		mg/Kg		89	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-39730/1-A

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39730

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:49	11/20/22 08:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:49	11/20/22 08:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:49	11/20/22 08:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	11/16/22 13:49	11/20/22 08:00	1
o-Terphenyl	104		70 - 130	11/16/22 13:49	11/20/22 08:00	1

Lab Sample ID: LCS 880-39730/2-A

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39730

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1002		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1045		mg/Kg		105	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-39730/2-A

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39730

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-39730/3-A

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39730

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	868.0		mg/Kg		87	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	1001		mg/Kg		100	70 - 130	4	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-21514-A-1-E MS

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39730

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	998	699.0		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	857.8		mg/Kg		86	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: 880-21514-A-1-F MSD

Matrix: Solid

Analysis Batch: 39984

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39730

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	997	934.7	F2	mg/Kg		94	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1008		mg/Kg		101	70 - 130	16	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	86		70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39709/1-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/20/22 16:54	1

Lab Sample ID: LCS 880-39709/2-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	255.7		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-39709/3-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	255.9		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3448-A-1-C MS

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1210		252	1415	4	mg/Kg		83	90 - 110

Lab Sample ID: 890-3448-A-1-D MSD

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1210		252	1415	4	mg/Kg		83	90 - 110	0	20

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

GC VOA

Prep Batch: 39841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	5035	
MB 880-39841/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	8021B	39841
MB 880-39841/5-A	Method Blank	Total/NA	Solid	8021B	39841
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	8021B	39841
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39841
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	39841
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39841

Analysis Batch: 40322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 39730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	8015NM Prep	
MB 880-39730/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39730/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39730/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21514-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21514-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	8015B NM	39730
MB 880-39730/1-A	Method Blank	Total/NA	Solid	8015B NM	39730
LCS 880-39730/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39730
LCSD 880-39730/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39730
880-21514-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	39730
880-21514-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39730

Analysis Batch: 40087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 39709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Soluble	Solid	DI Leach	
MB 880-39709/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

HPLC/IC (Continued)

Leach Batch: 39709 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3448-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3449-1	PH01	Soluble	Solid	300.0	39709
MB 880-39709/1-A	Method Blank	Soluble	Solid	300.0	39709
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	300.0	39709
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39709
890-3448-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	39709
890-3448-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	39709

Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Client Sample ID: PH01
Date Collected: 11/11/22 10:25
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3449-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 20:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40322	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40087	11/21/22 10:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39730	11/16/22 13:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39984	11/20/22 18:35	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 19:26	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3449-1
SDG: Rural Eddy NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3449-1	PH01	Solid	11/11/22 10:25	11/14/22 08:13	8

- 1
- 2
- 3
- 4
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- 13
- 14
- 15



Environment Testing

Houston, TX (281) 240-4200, Dallas, TX (214) 502-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No:

www.xenco.com Page _____ of _____

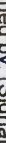
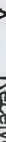
Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@Ensolum.com, jim.raley@dvn.com

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

[illegible][illegible]

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed			TCLP / SPLP 6010:		8RCRA	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U											
						Hg: 1631 / 245.1 / 7470 / 7471																											

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		11-14-20 8:13	2		
3			4		
5			6		

Revised Date: 08/25/2020 Row: 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3449-1

SDG Number: Rural Eddy NM

Login Number: 3449

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3449-1

SDG Number: Rural Eddy NM

Login Number: 3449

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 11/15/22 11:14 AM

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

Eurofins Carlsbad**Job Notes**

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

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11/23/2022 1:44:32 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/23/2022 1:44:18 PM

JOB DESCRIPTION

RDX 9-1
SDG NUMBER Rural Eddy NM

JOB NUMBER

890-3448-1

Client: Ensolum
Project/Site: RDX 9-1

Laboratory Job ID: 890-3448-1
SDG: Rural Eddy NM

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Definitions/Glossary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Job ID: 890-3448-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3448-1

Receipt

The samples were received on 11/14/2022 8:13 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions

The following samples > were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3448-1), PH01 (890-3448-2), PH02 (890-3448-3), PH02 (890-3448-4), PH03 (890-3448-5) and PH03 (890-3448-6).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-39841 and analytical batch 880-40174 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3433-A-1-D MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-39620 and analytical batch 880-39567 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-39620 and analytical batch 880-39567 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-39709 and analytical batch 880-40017 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH01

Lab Sample ID: 890-3448-1

Date Collected: 11/11/22 10:10

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 18:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130				11/17/22 15:04	11/22/22 18:13	1
1,4-Difluorobenzene (Surr)	112		70 - 130				11/17/22 15:04	11/22/22 18:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/16/22 09:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				11/15/22 13:35	11/15/22 23:26	1
o-Terphenyl	88		70 - 130				11/15/22 13:35	11/15/22 23:26	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1210		5.03		mg/Kg			11/20/22 18:30	1

Client Sample ID: PH01

Lab Sample ID: 890-3448-2

Date Collected: 11/11/22 10:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				11/17/22 15:04	11/22/22 18:34	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH01

Lab Sample ID: 890-3448-2

Date Collected: 11/11/22 10:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	110		70 - 130	11/17/22 15:04	11/22/22 18:34	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/16/22 09:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 23:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				11/15/22 13:35	11/15/22 23:48	1
o-Terphenyl	92		70 - 130				11/15/22 13:35	11/15/22 23:48	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2320		25.1		mg/Kg			11/20/22 18:47	5

Client Sample ID: PH02

Lab Sample ID: 890-3448-3

Date Collected: 11/11/22 10:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 18:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 18:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 18:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	11/17/22 15:04	11/22/22 18:54	1
1,4-Difluorobenzene (Surr)	113		70 - 130	11/17/22 15:04	11/22/22 18:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/16/22 09:14	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH02

Lab Sample ID: 890-3448-3

Date Collected: 11/11/22 10:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 00:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 00:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 00:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130				11/15/22 13:35	11/16/22 00:10	1
o-Terphenyl	83		70 - 130				11/15/22 13:35	11/16/22 00:10	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	281		5.04		mg/Kg			11/20/22 18:52	1

Client Sample ID: PH02

Lab Sample ID: 890-3448-4

Date Collected: 11/11/22 10:40

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 19:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				11/17/22 15:04	11/22/22 19:15	1
1,4-Difluorobenzene (Surr)	102		70 - 130				11/17/22 15:04	11/22/22 19:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/16/22 09:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/16/22 00:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/16/22 00:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/16/22 00:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130				11/15/22 13:35	11/16/22 00:32	1
o-Terphenyl	87		70 - 130				11/15/22 13:35	11/16/22 00:32	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH02

Lab Sample ID: 890-3448-4

Date Collected: 11/11/22 10:40

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 3

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	370		4.97		mg/Kg			11/20/22 19:09	1

Client Sample ID: PH03

Lab Sample ID: 890-3448-5

Date Collected: 11/11/22 10:50

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
o-Xylene	0.00259		0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 19:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130				11/17/22 15:04	11/22/22 19:35	1
1,4-Difluorobenzene (Surr)	104		70 - 130				11/17/22 15:04	11/22/22 19:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/16/22 09:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 01:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 01:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/15/22 13:35	11/16/22 01:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				11/15/22 13:35	11/16/22 01:38	1
o-Terphenyl	97		70 - 130				11/15/22 13:35	11/16/22 01:38	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.7		5.05		mg/Kg			11/20/22 19:15	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH03

Lab Sample ID: 890-3448-6

Date Collected: 11/11/22 11:00

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:55	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:55	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 19:55	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 19:55	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	11/17/22 15:04	11/22/22 19:55	1
1,4-Difluorobenzene (Surr)	119		70 - 130	11/17/22 15:04	11/22/22 19:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/16/22 09:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/15/22 13:35	11/16/22 00:54	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/15/22 13:35	11/16/22 00:54	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/15/22 13:35	11/16/22 00:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	11/15/22 13:35	11/16/22 00:54	1
o-Terphenyl	90		70 - 130	11/15/22 13:35	11/16/22 00:54	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	454		5.04		mg/Kg			11/20/22 19:21	1

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Surrogate Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3446-A-1-D MS	Matrix Spike	101	107
890-3446-A-1-E MSD	Matrix Spike Duplicate	98	109
890-3448-1	PH01	88	112
890-3448-2	PH01	99	110
890-3448-3	PH02	88	113
890-3448-4	PH02	96	102
890-3448-5	PH03	89	104
890-3448-6	PH03	90	119
LCS 880-39841/1-A	Lab Control Sample	87	100
LCSD 880-39841/2-A	Lab Control Sample Dup	89	101
MB 880-39841/5-A	Method Blank	79	97
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3433-A-1-D MS	Matrix Spike	76	65 S1-
890-3433-A-1-E MSD	Matrix Spike Duplicate	89	77
890-3448-1	PH01	86	88
890-3448-2	PH01	88	92
890-3448-3	PH02	82	83
890-3448-4	PH02	86	87
890-3448-5	PH03	100	97
890-3448-6	PH03	90	90
LCS 880-39620/2-A	Lab Control Sample	86	84
LCSD 880-39620/3-A	Lab Control Sample Dup	89	85
MB 880-39620/1-A	Method Blank	94	92
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39841/5-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	11/17/22 15:04	11/22/22 11:43	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/17/22 15:04	11/22/22 11:43	1

Lab Sample ID: LCS 880-39841/1-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.06882	*-	mg/Kg		69	70 - 130
Toluene	0.100	0.08552		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08348		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1521		mg/Kg		76	70 - 130
o-Xylene	0.100	0.07434		mg/Kg		74	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-39841/2-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07231		mg/Kg		72	70 - 130	5	35
Toluene	0.100	0.08620		mg/Kg		86	70 - 130	1	35
Ethylbenzene	0.100	0.08808		mg/Kg		88	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1599		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.07844		mg/Kg		78	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U *-	0.0996	0.08639		mg/Kg		87	70 - 130
Toluene	<0.00201	U	0.0996	0.1074		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0996	0.1063		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1903		mg/Kg		95	70 - 130
o-Xylene	<0.00201	U	0.0996	0.09294		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-3446-A-1-E MSD

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *-	0.0990	0.08751		mg/Kg		88	70 - 130	1	35
Toluene	<0.00201	U	0.0990	0.1051		mg/Kg		106	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0990	0.1021		mg/Kg		103	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1827		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08849		mg/Kg		89	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-39620/1-A

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39620

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 19:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 19:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/15/22 13:35	11/15/22 19:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	11/15/22 13:35	11/15/22 19:54	1
o-Terphenyl	92		70 - 130	11/15/22 13:35	11/15/22 19:54	1

Lab Sample ID: LCS 880-39620/2-A

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39620

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	953.5		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	838.5		mg/Kg		84	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-39620/2-A

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39620

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: LCSD 880-39620/3-A

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39620

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1012		mg/Kg		101	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	888.8		mg/Kg		89	70 - 130	6	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3433-A-1-D MS

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39620

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	997	984.7		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	641.4	F1	mg/Kg		64	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	76		70 - 130
o-Terphenyl	65	S1-	70 - 130

Lab Sample ID: 890-3433-A-1-E MSD

Matrix: Solid

Analysis Batch: 39567

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39620

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	999	1231	F2	mg/Kg		119	70 - 130	22	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	773.2		mg/Kg		77	70 - 130	19	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	77		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39709/1-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/20/22 16:54	1

Lab Sample ID: LCS 880-39709/2-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	255.7		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-39709/3-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	255.9		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3448-1 MS

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: PH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1210		252	1415	4	mg/Kg		83	90 - 110

Lab Sample ID: 890-3448-1 MSD

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: PH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1210		252	1415	4	mg/Kg		83	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

GC VOA

Prep Batch: 39841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	5035	
890-3448-2	PH01	Total/NA	Solid	5035	
890-3448-3	PH02	Total/NA	Solid	5035	
890-3448-4	PH02	Total/NA	Solid	5035	
890-3448-5	PH03	Total/NA	Solid	5035	
890-3448-6	PH03	Total/NA	Solid	5035	
MB 880-39841/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	8021B	39841
890-3448-2	PH01	Total/NA	Solid	8021B	39841
890-3448-3	PH02	Total/NA	Solid	8021B	39841
890-3448-4	PH02	Total/NA	Solid	8021B	39841
890-3448-5	PH03	Total/NA	Solid	8021B	39841
890-3448-6	PH03	Total/NA	Solid	8021B	39841
MB 880-39841/5-A	Method Blank	Total/NA	Solid	8021B	39841
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	8021B	39841
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39841
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	39841
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39841

Analysis Batch: 40321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	Total BTEX	
890-3448-2	PH01	Total/NA	Solid	Total BTEX	
890-3448-3	PH02	Total/NA	Solid	Total BTEX	
890-3448-4	PH02	Total/NA	Solid	Total BTEX	
890-3448-5	PH03	Total/NA	Solid	Total BTEX	
890-3448-6	PH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 39567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	8015B NM	39620
890-3448-2	PH01	Total/NA	Solid	8015B NM	39620
890-3448-3	PH02	Total/NA	Solid	8015B NM	39620
890-3448-4	PH02	Total/NA	Solid	8015B NM	39620
890-3448-5	PH03	Total/NA	Solid	8015B NM	39620
890-3448-6	PH03	Total/NA	Solid	8015B NM	39620
MB 880-39620/1-A	Method Blank	Total/NA	Solid	8015B NM	39620
LCS 880-39620/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39620
LCSD 880-39620/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39620
890-3433-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	39620
890-3433-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39620

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

GC Semi VOA

Prep Batch: 39620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	8015NM Prep	
890-3448-2	PH01	Total/NA	Solid	8015NM Prep	
890-3448-3	PH02	Total/NA	Solid	8015NM Prep	
890-3448-4	PH02	Total/NA	Solid	8015NM Prep	
890-3448-5	PH03	Total/NA	Solid	8015NM Prep	
890-3448-6	PH03	Total/NA	Solid	8015NM Prep	
MB 880-39620/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39620/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39620/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3433-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3433-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Total/NA	Solid	8015 NM	
890-3448-2	PH01	Total/NA	Solid	8015 NM	
890-3448-3	PH02	Total/NA	Solid	8015 NM	
890-3448-4	PH02	Total/NA	Solid	8015 NM	
890-3448-5	PH03	Total/NA	Solid	8015 NM	
890-3448-6	PH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 39709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Soluble	Solid	DI Leach	
890-3448-2	PH01	Soluble	Solid	DI Leach	
890-3448-3	PH02	Soluble	Solid	DI Leach	
890-3448-4	PH02	Soluble	Solid	DI Leach	
890-3448-5	PH03	Soluble	Solid	DI Leach	
890-3448-6	PH03	Soluble	Solid	DI Leach	
MB 880-39709/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3448-1 MS	PH01	Soluble	Solid	DI Leach	
890-3448-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 40017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3448-1	PH01	Soluble	Solid	300.0	39709
890-3448-2	PH01	Soluble	Solid	300.0	39709
890-3448-3	PH02	Soluble	Solid	300.0	39709
890-3448-4	PH02	Soluble	Solid	300.0	39709
890-3448-5	PH03	Soluble	Solid	300.0	39709
890-3448-6	PH03	Soluble	Solid	300.0	39709
MB 880-39709/1-A	Method Blank	Soluble	Solid	300.0	39709
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	300.0	39709
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39709
890-3448-1 MS	PH01	Soluble	Solid	300.0	39709
890-3448-1 MSD	PH01	Soluble	Solid	300.0	39709

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Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH01
Date Collected: 11/11/22 10:10
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 18:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/15/22 23:26	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:30	CH	EET MID

Client Sample ID: PH01
Date Collected: 11/11/22 10:20
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 18:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/15/22 23:48	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	40017	11/20/22 18:47	CH	EET MID

Client Sample ID: PH02
Date Collected: 11/11/22 10:30
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 18:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/16/22 00:10	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:52	CH	EET MID

Client Sample ID: PH02
Date Collected: 11/11/22 10:40
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 19:15	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Client Sample ID: PH02
Date Collected: 11/11/22 10:40
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/16/22 00:32	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 19:09	CH	EET MID

Client Sample ID: PH03
Date Collected: 11/11/22 10:50
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 19:35	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/16/22 01:38	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 19:15	CH	EET MID

Client Sample ID: PH03
Date Collected: 11/11/22 11:00
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3448-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 19:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40321	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			39673	11/16/22 09:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	39620	11/15/22 13:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39567	11/16/22 00:54	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 19:21	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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Method Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3448-1
SDG: Rural Eddy NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3448-1	PH01	Solid	11/11/22 10:10	11/14/22 08:13	0.5
890-3448-2	PH01	Solid	11/11/22 10:20	11/14/22 08:13	3
890-3448-3	PH02	Solid	11/11/22 10:30	11/14/22 08:13	0.5
890-3448-4	PH02	Solid	11/11/22 10:40	11/14/22 08:13	3
890-3448-5	PH03	Solid	11/11/22 10:50	11/14/22 08:13	0.5
890-3448-6	PH03	Solid	11/11/22 11:00	11/14/22 08:13	3

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jherandez@Ensolum.com, jim.raley@dvn.com

Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	RDX 9-1	Turn Around	Pres. Code	ANALYSIS REQUEST	Preservative Codes
Project Number:	03A1987060	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush			None: NO DI Water: H ₂ O
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT		Cool: Cool MeOH: Me
Sampler's Name:	Yocoly Eddy Konan	TAT starts the day received by the lab, if received by 4:30pm			HCL: HC HNO ₃ : HN
CC #:	1061092601	Temp Blank:	Yes (NO)	Wet Ice:	H ₂ SO ₄ : H ₂
SAMPLE RECEIPT	Temp Blank: Yes (NO)	Thermometer ID:	NM0007		H ₃ PO ₄ : HP
Samples Received Intact:	Yes (NO)	Correction Factor:	N/A		NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes (NO)	Temperature Reading:	5.4		Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes (NO)	Corrected Temperature:	5.4		Zn Acetate+NaOH: Zn
Total Containers:					NaOH+Ascorbic Acid: SAPC



890-3448 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
PH01	S	11.11.22	10:10	0.5'	Grab/	1	X	X	X	
PH01	S	11.11.22	10:20	3'	Grab/	1	X	X	X	
PH02	S	11.11.22	10:30	0.5'	Grab/	1	X	X	X	
PH02	S	11.11.22	10:40	3'	Grab/	1	X	X	X	
PH03	S	11.11.22	10:50	0.5'	Grab/	1	X	X	X	
PH03	S	11.11.22	11:00	3'	Grab/	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245 / 17470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11.14.22 813			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3448-1

SDG Number: Rural Eddy NM

Login Number: 3448

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3448-1

SDG Number: Rural Eddy NM

Login Number: 3448

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 11/15/22 11:14 AM

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

Eurofins Carlsbad**Job Notes**

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/23/2022 1:43:45 PM

JOB DESCRIPTION

RDX 9-1
SDG NUMBER 03A1987060

JOB NUMBER

890-3447-1

Client: Ensolum
Project/Site: RDX 9-1

Laboratory Job ID: 890-3447-1
SDG: 03A1987060

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Definitions/Glossary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Job ID: 890-3447-1

Laboratory: Eurofins Carlsbad

Narrative	Job Narrative 890-3447-1
-----------	-----------------------------

Receipt

The samples were received on 11/14/2022 8:13 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH04 (890-3447-1), PH04 (890-3447-2), PH05 (890-3447-3), PH05 (890-3447-4), PH06 (890-3447-5), PH06 (890-3447-6), PH07 (890-3447-7), PH07 (890-3447-8), PH08 (890-3447-9) and PH08 (890-3447-10).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-39841 and analytical batch 880-40174 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-39729/2-A) and (LCSD 880-39729/3-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH04

Lab Sample ID: 890-3447-1

Date Collected: 11/11/22 11:10

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 12:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 12:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 12:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 12:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 12:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	11/17/22 15:04	11/22/22 12:53	1
1,4-Difluorobenzene (Surr)	112		70 - 130	11/17/22 15:04	11/22/22 12:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 15:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 15:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	11/16/22 13:44	11/20/22 15:21	1
o-Terphenyl	104		70 - 130	11/16/22 13:44	11/20/22 15:21	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.6		4.97		mg/Kg			11/20/22 17:11	1

Client Sample ID: PH04

Lab Sample ID: 890-3447-2

Date Collected: 11/11/22 11:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *	0.00202		mg/Kg		11/17/22 15:04	11/22/22 13:13	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/17/22 15:04	11/22/22 13:13	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/17/22 15:04	11/22/22 13:13	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		11/17/22 15:04	11/22/22 13:13	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/17/22 15:04	11/22/22 13:13	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		11/17/22 15:04	11/22/22 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	11/17/22 15:04	11/22/22 13:13	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH04

Lab Sample ID: 890-3447-2

Date Collected: 11/11/22 11:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	111		70 - 130	11/17/22 15:04	11/22/22 13:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 15:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 15:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 15:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130				11/16/22 13:44	11/20/22 15:42	1
o-Terphenyl	94		70 - 130				11/16/22 13:44	11/20/22 15:42	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.7		4.96		mg/Kg			11/20/22 17:28	1

Client Sample ID: PH05

Lab Sample ID: 890-3447-3

Date Collected: 11/11/22 11:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *	0.00200		mg/Kg		11/17/22 15:04	11/22/22 13:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 13:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 13:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 13:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 13:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 13:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	11/17/22 15:04	11/22/22 13:34	1
1,4-Difluorobenzene (Surr)	108		70 - 130	11/17/22 15:04	11/22/22 13:34	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH05

Lab Sample ID: 890-3447-3

Date Collected: 11/11/22 11:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130				11/16/22 13:44	11/20/22 16:04	1
o-Terphenyl	96		70 - 130				11/16/22 13:44	11/20/22 16:04	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	182		5.00		mg/Kg			11/20/22 17:33	1

Client Sample ID: PH05

Lab Sample ID: 890-3447-4

Date Collected: 11/11/22 11:40

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130				11/17/22 15:04	11/22/22 13:54	1
1,4-Difluorobenzene (Surr)	114		70 - 130				11/17/22 15:04	11/22/22 13:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 16:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 16:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 16:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				11/16/22 13:44	11/20/22 16:25	1
o-Terphenyl	104		70 - 130				11/16/22 13:44	11/20/22 16:25	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH05

Lab Sample ID: 890-3447-4

Date Collected: 11/11/22 11:40

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	207		5.03		mg/Kg			11/20/22 17:39	1

Client Sample ID: PH06

Lab Sample ID: 890-3447-5

Date Collected: 11/11/22 11:50

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 14:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130				11/17/22 15:04	11/22/22 14:14	1
1,4-Difluorobenzene (Surr)	112		70 - 130				11/17/22 15:04	11/22/22 14:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:48	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130				11/16/22 13:44	11/20/22 16:48	1
o-Terphenyl	83		70 - 130				11/16/22 13:44	11/20/22 16:48	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.3		5.05		mg/Kg			11/20/22 17:44	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH06

Lab Sample ID: 890-3447-6

Date Collected: 11/11/22 12:00

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 14:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				11/17/22 15:04	11/22/22 14:35	1
1,4-Difluorobenzene (Surr)	103		70 - 130				11/17/22 15:04	11/22/22 14:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 17:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 17:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				11/16/22 13:44	11/20/22 17:10	1
o-Terphenyl	105		70 - 130				11/16/22 13:44	11/20/22 17:10	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.3		5.02		mg/Kg			11/20/22 18:01	1

Client Sample ID: PH07

Lab Sample ID: 890-3447-7

Date Collected: 11/11/22 12:10

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				11/17/22 15:04	11/22/22 14:55	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH07

Lab Sample ID: 890-3447-7

Date Collected: 11/11/22 12:10

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106		70 - 130	11/17/22 15:04	11/22/22 14:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				11/16/22 13:44	11/20/22 17:31	1
o-Terphenyl	109		70 - 130				11/16/22 13:44	11/20/22 17:31	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.5		4.98		mg/Kg			11/20/22 18:07	1

Client Sample ID: PH07

Lab Sample ID: 890-3447-8

Date Collected: 11/11/22 12:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *	0.00201		mg/Kg		11/17/22 15:04	11/22/22 15:16	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 15:16	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 15:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 15:16	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 15:16	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	11/17/22 15:04	11/22/22 15:16	1
1,4-Difluorobenzene (Surr)	106		70 - 130	11/17/22 15:04	11/22/22 15:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH07

Lab Sample ID: 890-3447-8

Date Collected: 11/11/22 12:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 17:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				11/16/22 13:44	11/20/22 17:52	1
o-Terphenyl	106		70 - 130				11/16/22 13:44	11/20/22 17:52	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.4		4.97		mg/Kg			11/20/22 18:13	1

Client Sample ID: PH08

Lab Sample ID: 890-3447-9

Date Collected: 11/11/22 12:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *	0.00200		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/17/22 15:04	11/22/22 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130				11/17/22 15:04	11/22/22 17:05	1
1,4-Difluorobenzene (Surr)	107		70 - 130				11/17/22 15:04	11/22/22 17:05	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 18:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 18:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 18:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				11/16/22 13:44	11/20/22 18:14	1
o-Terphenyl	108		70 - 130				11/16/22 13:44	11/20/22 18:14	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH08

Lab Sample ID: 890-3447-9

Date Collected: 11/11/22 12:30

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.6		5.01		mg/Kg			11/20/22 18:18	1

Client Sample ID: PH08

Lab Sample ID: 890-3447-10

Date Collected: 11/11/22 12:40

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *	0.00199		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/17/22 15:04	11/22/22 17:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				11/17/22 15:04	11/22/22 17:26	1
1,4-Difluorobenzene (Surr)	114		70 - 130				11/17/22 15:04	11/22/22 17:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 18:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 18:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				11/16/22 13:44	11/20/22 18:35	1
o-Terphenyl	110		70 - 130				11/16/22 13:44	11/20/22 18:35	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.0		4.98		mg/Kg			11/20/22 18:24	1

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Surrogate Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
890-3446-A-1-D MS	Matrix Spike	101	107				
890-3446-A-1-E MSD	Matrix Spike Duplicate	98	109				
890-3447-1	PH04	91	112				
890-3447-2	PH04	90	111				
890-3447-3	PH05	94	108				
890-3447-4	PH05	91	114				
890-3447-5	PH06	93	112				
890-3447-6	PH06	96	103				
890-3447-7	PH07	94	106				
890-3447-8	PH07	97	106				
890-3447-9	PH08	82	107				
890-3447-10	PH08	94	114				
LCS 880-39841/1-A	Lab Control Sample	87	100				
LCSD 880-39841/2-A	Lab Control Sample Dup	89	101				
MB 880-39841/5-A	Method Blank	79	97				
Surrogate Legend							
BFB = 4-Bromofluorobenzene (Surr)							
DFBZ = 1,4-Difluorobenzene (Surr)							

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-21513-A-1-D MS	Matrix Spike	78	78				
880-21513-A-1-E MSD	Matrix Spike Duplicate	77	76				
890-3447-1	PH04	91	104				
890-3447-2	PH04	83	94				
890-3447-3	PH05	85	96				
890-3447-4	PH05	90	104				
890-3447-5	PH06	74	83				
890-3447-6	PH06	94	105				
890-3447-7	PH07	97	109				
890-3447-8	PH07	91	106				
890-3447-9	PH08	95	108				
890-3447-10	PH08	95	110				
LCS 880-39729/2-A	Lab Control Sample	168 S1+	196 S1+				
LCSD 880-39729/3-A	Lab Control Sample Dup	158 S1+	181 S1+				
MB 880-39729/1-A	Method Blank	97	114				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39841/5-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	11/17/22 15:04	11/22/22 11:43	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/17/22 15:04	11/22/22 11:43	1

Lab Sample ID: LCS 880-39841/1-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.06882	*-	mg/Kg		69	70 - 130
Toluene	0.100	0.08552		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08348		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1521		mg/Kg		76	70 - 130
o-Xylene	0.100	0.07434		mg/Kg		74	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-39841/2-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07231		mg/Kg		72	70 - 130	5	35
Toluene	0.100	0.08620		mg/Kg		86	70 - 130	1	35
Ethylbenzene	0.100	0.08808		mg/Kg		88	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1599		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.07844		mg/Kg		78	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U *-	0.0996	0.08639		mg/Kg		87	70 - 130
Toluene	<0.00201	U	0.0996	0.1074		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3446-A-1-D MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0996	0.1063		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1903		mg/Kg		95	70 - 130
o-Xylene	<0.00201	U	0.0996	0.09294		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-3446-A-1-E MSD

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *-	0.0990	0.08751		mg/Kg		88	70 - 130	1	35
Toluene	<0.00201	U	0.0990	0.1051		mg/Kg		106	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0990	0.1021		mg/Kg		103	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1827		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08849		mg/Kg		89	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-39729/1-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	11/16/22 13:44	11/20/22 08:00	1
o-Terphenyl	114		70 - 130	11/16/22 13:44	11/20/22 08:00	1

Lab Sample ID: LCS 880-39729/2-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	826.9		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	1000	983.8		mg/Kg		98	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-39729/2-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39729

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	168	S1+	70 - 130
o-Terphenyl	196	S1+	70 - 130

Lab Sample ID: LCSD 880-39729/3-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	827.6		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	913.8		mg/Kg		91	70 - 130	7	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	181	S1+	70 - 130

Lab Sample ID: 880-21513-A-1-D MS

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1247		mg/Kg		125	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	916.4		mg/Kg		89	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	78		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 880-21513-A-1-E MSD

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1229		mg/Kg		123	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	904.7		mg/Kg		88	70 - 130	1	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	76		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39709/1-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/20/22 16:54	1

Lab Sample ID: LCS 880-39709/2-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	255.7		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-39709/3-A

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	255.9		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3447-1 MS

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: PH04

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	16.6		249	280.8		mg/Kg		106	90 - 110

Lab Sample ID: 890-3447-1 MSD

Matrix: Solid

Analysis Batch: 40017

Client Sample ID: PH04

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	16.6		249	281.6		mg/Kg		107	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

GC VOA

Prep Batch: 39841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	5035	
890-3447-2	PH04	Total/NA	Solid	5035	
890-3447-3	PH05	Total/NA	Solid	5035	
890-3447-4	PH05	Total/NA	Solid	5035	
890-3447-5	PH06	Total/NA	Solid	5035	
890-3447-6	PH06	Total/NA	Solid	5035	
890-3447-7	PH07	Total/NA	Solid	5035	
890-3447-8	PH07	Total/NA	Solid	5035	
890-3447-9	PH08	Total/NA	Solid	5035	
890-3447-10	PH08	Total/NA	Solid	5035	
MB 880-39841/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	8021B	39841
890-3447-2	PH04	Total/NA	Solid	8021B	39841
890-3447-3	PH05	Total/NA	Solid	8021B	39841
890-3447-4	PH05	Total/NA	Solid	8021B	39841
890-3447-5	PH06	Total/NA	Solid	8021B	39841
890-3447-6	PH06	Total/NA	Solid	8021B	39841
890-3447-7	PH07	Total/NA	Solid	8021B	39841
890-3447-8	PH07	Total/NA	Solid	8021B	39841
890-3447-9	PH08	Total/NA	Solid	8021B	39841
890-3447-10	PH08	Total/NA	Solid	8021B	39841
MB 880-39841/5-A	Method Blank	Total/NA	Solid	8021B	39841
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	8021B	39841
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39841
890-3446-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	39841
890-3446-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39841

Analysis Batch: 40320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	Total BTEX	
890-3447-2	PH04	Total/NA	Solid	Total BTEX	
890-3447-3	PH05	Total/NA	Solid	Total BTEX	
890-3447-4	PH05	Total/NA	Solid	Total BTEX	
890-3447-5	PH06	Total/NA	Solid	Total BTEX	
890-3447-6	PH06	Total/NA	Solid	Total BTEX	
890-3447-7	PH07	Total/NA	Solid	Total BTEX	
890-3447-8	PH07	Total/NA	Solid	Total BTEX	
890-3447-9	PH08	Total/NA	Solid	Total BTEX	
890-3447-10	PH08	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

GC Semi VOA

Prep Batch: 39729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	8015NM Prep	
890-3447-2	PH04	Total/NA	Solid	8015NM Prep	
890-3447-3	PH05	Total/NA	Solid	8015NM Prep	
890-3447-4	PH05	Total/NA	Solid	8015NM Prep	
890-3447-5	PH06	Total/NA	Solid	8015NM Prep	
890-3447-6	PH06	Total/NA	Solid	8015NM Prep	
890-3447-7	PH07	Total/NA	Solid	8015NM Prep	
890-3447-8	PH07	Total/NA	Solid	8015NM Prep	
890-3447-9	PH08	Total/NA	Solid	8015NM Prep	
890-3447-10	PH08	Total/NA	Solid	8015NM Prep	
MB 880-39729/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39729/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39729/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21513-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21513-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	8015B NM	39729
890-3447-2	PH04	Total/NA	Solid	8015B NM	39729
890-3447-3	PH05	Total/NA	Solid	8015B NM	39729
890-3447-4	PH05	Total/NA	Solid	8015B NM	39729
890-3447-5	PH06	Total/NA	Solid	8015B NM	39729
890-3447-6	PH06	Total/NA	Solid	8015B NM	39729
890-3447-7	PH07	Total/NA	Solid	8015B NM	39729
890-3447-8	PH07	Total/NA	Solid	8015B NM	39729
890-3447-9	PH08	Total/NA	Solid	8015B NM	39729
890-3447-10	PH08	Total/NA	Solid	8015B NM	39729
MB 880-39729/1-A	Method Blank	Total/NA	Solid	8015B NM	39729
LCS 880-39729/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39729
LCSD 880-39729/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39729
880-21513-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	39729
880-21513-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39729

Analysis Batch: 40101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Total/NA	Solid	8015 NM	
890-3447-2	PH04	Total/NA	Solid	8015 NM	
890-3447-3	PH05	Total/NA	Solid	8015 NM	
890-3447-4	PH05	Total/NA	Solid	8015 NM	
890-3447-5	PH06	Total/NA	Solid	8015 NM	
890-3447-6	PH06	Total/NA	Solid	8015 NM	
890-3447-7	PH07	Total/NA	Solid	8015 NM	
890-3447-8	PH07	Total/NA	Solid	8015 NM	
890-3447-9	PH08	Total/NA	Solid	8015 NM	
890-3447-10	PH08	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

HPLC/IC

Leach Batch: 39709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Soluble	Solid	DI Leach	
890-3447-2	PH04	Soluble	Solid	DI Leach	
890-3447-3	PH05	Soluble	Solid	DI Leach	
890-3447-4	PH05	Soluble	Solid	DI Leach	
890-3447-5	PH06	Soluble	Solid	DI Leach	
890-3447-6	PH06	Soluble	Solid	DI Leach	
890-3447-7	PH07	Soluble	Solid	DI Leach	
890-3447-8	PH07	Soluble	Solid	DI Leach	
890-3447-9	PH08	Soluble	Solid	DI Leach	
890-3447-10	PH08	Soluble	Solid	DI Leach	
MB 880-39709/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3447-1 MS	PH04	Soluble	Solid	DI Leach	
890-3447-1 MSD	PH04	Soluble	Solid	DI Leach	

Analysis Batch: 40017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3447-1	PH04	Soluble	Solid	300.0	39709
890-3447-2	PH04	Soluble	Solid	300.0	39709
890-3447-3	PH05	Soluble	Solid	300.0	39709
890-3447-4	PH05	Soluble	Solid	300.0	39709
890-3447-5	PH06	Soluble	Solid	300.0	39709
890-3447-6	PH06	Soluble	Solid	300.0	39709
890-3447-7	PH07	Soluble	Solid	300.0	39709
890-3447-8	PH07	Soluble	Solid	300.0	39709
890-3447-9	PH08	Soluble	Solid	300.0	39709
890-3447-10	PH08	Soluble	Solid	300.0	39709
MB 880-39709/1-A	Method Blank	Soluble	Solid	300.0	39709
LCS 880-39709/2-A	Lab Control Sample	Soluble	Solid	300.0	39709
LCSD 880-39709/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39709
890-3447-1 MS	PH04	Soluble	Solid	300.0	39709
890-3447-1 MSD	PH04	Soluble	Solid	300.0	39709

Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH04
Date Collected: 11/11/22 11:10
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 12:53	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 15:21	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 17:11	CH	EET MID

Client Sample ID: PH04
Date Collected: 11/11/22 11:20
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 13:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 15:42	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 17:28	CH	EET MID

Client Sample ID: PH05
Date Collected: 11/11/22 11:30
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 13:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 16:04	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 17:33	CH	EET MID

Client Sample ID: PH05
Date Collected: 11/11/22 11:40
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 13:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH05
Date Collected: 11/11/22 11:40
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 16:25	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 17:39	CH	EET MID

Client Sample ID: PH06
Date Collected: 11/11/22 11:50
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 14:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 16:48	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 17:44	CH	EET MID

Client Sample ID: PH06
Date Collected: 11/11/22 12:00
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 14:35	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 17:10	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:01	CH	EET MID

Client Sample ID: PH07
Date Collected: 11/11/22 12:10
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3447-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 14:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 17:31	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Client Sample ID: PH07

Lab Sample ID: 890-3447-7

Date Collected: 11/11/22 12:10

Matrix: Solid

Date Received: 11/14/22 08:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:07	CH	EET MID

Client Sample ID: PH07

Lab Sample ID: 890-3447-8

Date Collected: 11/11/22 12:20

Matrix: Solid

Date Received: 11/14/22 08:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 15:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 17:52	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:13	CH	EET MID

Client Sample ID: PH08

Lab Sample ID: 890-3447-9

Date Collected: 11/11/22 12:30

Matrix: Solid

Date Received: 11/14/22 08:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 17:05	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 18:14	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:18	CH	EET MID

Client Sample ID: PH08

Lab Sample ID: 890-3447-10

Date Collected: 11/11/22 12:40

Matrix: Solid

Date Received: 11/14/22 08:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 17:26	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40320	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40101	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 18:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	39709	11/16/22 10:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40017	11/20/22 18:24	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
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- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3447-1
SDG: 03A1987060

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3447-1	PH04	Solid	11/11/22 11:10	11/14/22 08:13	0.5
890-3447-2	PH04	Solid	11/11/22 11:20	11/14/22 08:13	1
890-3447-3	PH05	Solid	11/11/22 11:30	11/14/22 08:13	0.5
890-3447-4	PH05	Solid	11/11/22 11:40	11/14/22 08:13	1
890-3447-5	PH06	Solid	11/11/22 11:50	11/14/22 08:13	0.5
890-3447-6	PH06	Solid	11/11/22 12:00	11/14/22 08:13	1
890-3447-7	PH07	Solid	11/11/22 12:10	11/14/22 08:13	0.5
890-3447-8	PH07	Solid	11/11/22 12:20	11/14/22 08:13	1
890-3447-9	PH08	Solid	11/11/22 12:30	11/14/22 08:13	0.5
890-3447-10	PH08	Solid	11/11/22 12:40	11/14/22 08:13	1



Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jherandez@Ensolum.com, jim.raley@dvn.com

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

Project Name:	RDX 9-1	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code		ANALYSIS REQUEST		Preservative Codes	
Project Number:	03A1987060	Due Date:	5 Day TAT					None: NO DI Water: H ₂ O	
Project Location:	Rural Eddy, NM	TAT starts the day received by the lab, if received by 4:30pm							Cool: Cool MeOH: Me
Sampler's Name:	Yocely Eddy Konan								HCL: HC HNO ₃ : HN
CC #:	1061092601	Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			H ₂ SO ₄ : H ₂ NaOH: Na	
SAMPLE RECEIPT		Thermometer ID:	TW 10007						H ₃ PO ₄ : HP
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.02						NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Temperature Reading:	5.6						Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Corrected Temperature:	5.4						Zn Acetate+NaOH: Zn
Total Containers:									NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Incident ID	Sample Comments
PH04	S	11.11.22	11:10	0.5'	Grab/	1	X	X	X		
PH04	S	11.11.22	11:20	1'	Grab/	1	X	X	X		
PH05	S	11.11.22	11:30	0.5'	Grab/	1	X	X	X		
PH05	S	11.11.22	11:40	1'	Grab/	1	X	X	X		
PH06	S	11.11.22	11:50	0.5'	Grab/	1	X	X	X		
PH06	S	11.11.22	12:00	1'	Grab/	1	X	X	X		
PH07	S	11.11.22	12:10	0.5'	Grab/	1	X	X	X		
PH07	S	11.11.22	12:20	1'	Grab/	1	X	X	X		
PH08	S	11.11.22	12:30	0.5'	Grab/	1	X	X	X		
PH08	S	11.11.22	12:40	1'	Grab/	1	X	X	X		

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11-19-22 8:13			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3447-1

SDG Number: 03A1987060

Login Number: 3447

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3447-1

SDG Number: 03A1987060

Login Number: 3447

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 11/15/22 11:14 AM

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

Eurofins Carlsbad**Job Notes**

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

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11/23/2022 1:43:45 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/23/2022 1:43:28 PM

JOB DESCRIPTION

RDX 9-1
SDG NUMBER Rural Eddy NM

JOB NUMBER

890-3446-1

Client: Ensolum
Project/Site: RDX 9-1

Laboratory Job ID: 890-3446-1
SDG: Rural Eddy NM

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Definitions/Glossary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Job ID: 890-3446-1

Laboratory: Eurofins Carlsbad

Narrative	Job Narrative 890-3446-1
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Receipt

The samples were received on 11/14/2022 8:13 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH09 (890-3446-1) and PH09 (890-3446-2).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-39841 and analytical batch 880-40174 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-39729/2-A) and (LCSD 880-39729/3-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Client Sample ID: PH09

Lab Sample ID: 890-3446-1

Date Collected: 11/11/22 12:50

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/17/22 15:04	11/22/22 12:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130				11/17/22 15:04	11/22/22 12:12	1
1,4-Difluorobenzene (Surr)	100		70 - 130				11/17/22 15:04	11/22/22 12:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 14:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 14:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 14:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				11/16/22 13:44	11/20/22 14:16	1
o-Terphenyl	107		70 - 130				11/16/22 13:44	11/20/22 14:16	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1080		5.04		mg/Kg			11/19/22 16:22	1

Client Sample ID: PH09

Lab Sample ID: 890-3446-2

Date Collected: 11/11/22 13:00

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/17/22 15:04	11/22/22 12:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				11/17/22 15:04	11/22/22 12:32	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Client Sample ID: PH09

Lab Sample ID: 890-3446-2

Date Collected: 11/11/22 13:00

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	115		70 - 130	11/17/22 15:04	11/22/22 12:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/23/22 13:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/21/22 11:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 14:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 14:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/16/22 13:44	11/20/22 14:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				11/16/22 13:44	11/20/22 14:38	1
o-Terphenyl	113		70 - 130				11/16/22 13:44	11/20/22 14:38	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1400		24.9		mg/Kg			11/19/22 16:39	5

Surrogate Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3446-1	PH09	83	100
890-3446-1 MS	PH09	101	107
890-3446-1 MSD	PH09	98	109
890-3446-2	PH09	94	115
LCS 880-39841/1-A	Lab Control Sample	87	100
LCSD 880-39841/2-A	Lab Control Sample Dup	89	101
MB 880-39841/5-A	Method Blank	79	97
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-21513-A-1-D MS	Matrix Spike	78	78
880-21513-A-1-E MSD	Matrix Spike Duplicate	77	76
890-3446-1	PH09	95	107
890-3446-2	PH09	100	113
LCS 880-39729/2-A	Lab Control Sample	168 S1+	196 S1+
LCSD 880-39729/3-A	Lab Control Sample Dup	158 S1+	181 S1+
MB 880-39729/1-A	Method Blank	97	114
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39841/5-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/17/22 15:04	11/22/22 11:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/17/22 15:04	11/22/22 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	11/17/22 15:04	11/22/22 11:43	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/17/22 15:04	11/22/22 11:43	1

Lab Sample ID: LCS 880-39841/1-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.06882	*-	mg/Kg		69	70 - 130
Toluene	0.100	0.08552		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08348		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1521		mg/Kg		76	70 - 130
o-Xylene	0.100	0.07434		mg/Kg		74	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-39841/2-A

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07231		mg/Kg		72	70 - 130	5	35
Toluene	0.100	0.08620		mg/Kg		86	70 - 130	1	35
Ethylbenzene	0.100	0.08808		mg/Kg		88	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1599		mg/Kg		80	70 - 130	5	35
o-Xylene	0.100	0.07844		mg/Kg		78	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3446-1 MS

Matrix: Solid

Analysis Batch: 40174

Client Sample ID: PH09

Prep Type: Total/NA

Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U *-	0.0996	0.08639		mg/Kg		87	70 - 130
Toluene	<0.00201	U	0.0996	0.1074		mg/Kg		108	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3446-1 MS
Matrix: Solid
Analysis Batch: 40174

Client Sample ID: PH09
Prep Type: Total/NA
Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0996	0.1063		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1903		mg/Kg		95	70 - 130
o-Xylene	<0.00201	U	0.0996	0.09294		mg/Kg		93	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	101		70 - 130						
1,4-Difluorobenzene (Surr)	107		70 - 130						

Lab Sample ID: 890-3446-1 MSD
Matrix: Solid
Analysis Batch: 40174

Client Sample ID: PH09
Prep Type: Total/NA
Prep Batch: 39841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *-	0.0990	0.08751		mg/Kg		88	70 - 130	1	35
Toluene	<0.00201	U	0.0990	0.1051		mg/Kg		106	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0990	0.1021		mg/Kg		103	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1827		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08849		mg/Kg		89	70 - 130	5	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	98		70 - 130								
1,4-Difluorobenzene (Surr)	109		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-39729/1-A
Matrix: Solid
Analysis Batch: 39986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 13:44	11/20/22 08:00	1
Surrogate	MB %Recovery	MB Qualifier	Limits						
1-Chlorooctane	97		70 - 130						
o-Terphenyl	114		70 - 130						

Lab Sample ID: LCS 880-39729/2-A
Matrix: Solid
Analysis Batch: 39986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	826.9		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	1000	983.8		mg/Kg		98	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-39729/2-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39729

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	168	S1+	70 - 130
o-Terphenyl	196	S1+	70 - 130

Lab Sample ID: LCSD 880-39729/3-A

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	827.6		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	913.8		mg/Kg		91	70 - 130	7	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	158	S1+	70 - 130
o-Terphenyl	181	S1+	70 - 130

Lab Sample ID: 880-21513-A-1-D MS

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1247		mg/Kg		125	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	916.4		mg/Kg		89	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	78		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 880-21513-A-1-E MSD

Matrix: Solid

Analysis Batch: 39986

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1229		mg/Kg		123	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	904.7		mg/Kg		88	70 - 130	1	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	76		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39710/1-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/19/22 14:23	1

Lab Sample ID: LCS 880-39710/2-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	259.5		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-39710/3-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	256.0		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-3444-A-2-D MS

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1800		1260	3101		mg/Kg		103	90 - 110

Lab Sample ID: 890-3444-A-2-E MSD

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1800		1260	3109		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-3450-A-4-B MS

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	218		249	445.1		mg/Kg		91	90 - 110

Lab Sample ID: 890-3450-A-4-C MSD

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	218		249	447.9		mg/Kg		93	90 - 110	1	20

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

GC VOA

Prep Batch: 39841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	5035	
890-3446-2	PH09	Total/NA	Solid	5035	
MB 880-39841/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3446-1 MS	PH09	Total/NA	Solid	5035	
890-3446-1 MSD	PH09	Total/NA	Solid	5035	

Analysis Batch: 40174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	8021B	39841
890-3446-2	PH09	Total/NA	Solid	8021B	39841
MB 880-39841/5-A	Method Blank	Total/NA	Solid	8021B	39841
LCS 880-39841/1-A	Lab Control Sample	Total/NA	Solid	8021B	39841
LCSD 880-39841/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39841
890-3446-1 MS	PH09	Total/NA	Solid	8021B	39841
890-3446-1 MSD	PH09	Total/NA	Solid	8021B	39841

Analysis Batch: 40319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	Total BTEX	
890-3446-2	PH09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 39729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	8015NM Prep	
890-3446-2	PH09	Total/NA	Solid	8015NM Prep	
MB 880-39729/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39729/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39729/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21513-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21513-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	8015B NM	39729
890-3446-2	PH09	Total/NA	Solid	8015B NM	39729
MB 880-39729/1-A	Method Blank	Total/NA	Solid	8015B NM	39729
LCS 880-39729/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39729
LCSD 880-39729/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39729
880-21513-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	39729
880-21513-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39729

Analysis Batch: 40100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Total/NA	Solid	8015 NM	
890-3446-2	PH09	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

HPLC/IC

Leach Batch: 39710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Soluble	Solid	DI Leach	
890-3446-2	PH09	Soluble	Solid	DI Leach	
MB 880-39710/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39710/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39710/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3444-A-2-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3444-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-3450-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3450-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 39996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3446-1	PH09	Soluble	Solid	300.0	39710
890-3446-2	PH09	Soluble	Solid	300.0	39710
MB 880-39710/1-A	Method Blank	Soluble	Solid	300.0	39710
LCS 880-39710/2-A	Lab Control Sample	Soluble	Solid	300.0	39710
LCSD 880-39710/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39710
890-3444-A-2-D MS	Matrix Spike	Soluble	Solid	300.0	39710
890-3444-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	39710
890-3450-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	39710
890-3450-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	39710

Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Client Sample ID: PH09
Date Collected: 11/11/22 12:50
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3446-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 12:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40319	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40100	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 14:16	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	39710	11/16/22 10:47	KS	EET MID
Soluble	Analysis	300.0		1			39996	11/19/22 16:22	CH	EET MID

Client Sample ID: PH09
Date Collected: 11/11/22 13:00
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3446-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	39841	11/17/22 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40174	11/22/22 12:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40319	11/23/22 13:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			40100	11/21/22 11:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	39729	11/16/22 13:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39986	11/20/22 14:38	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	39710	11/16/22 10:47	KS	EET MID
Soluble	Analysis	300.0		5			39996	11/19/22 16:39	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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Method Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3446-1
SDG: Rural Eddy NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3446-1	PH09	Solid	11/11/22 12:50	11/14/22 08:13	0.5
890-3446-2	PH09	Solid	11/11/22 13:00	11/14/22 08:13	1

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No:

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	bernandez@Ensolum.com, jim.raley@dvn.com

Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	RDX 9-1	Turn Around	Prep. Code	ANALYSIS REQUEST		Preservative Codes
Project Number:	03A1987060	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush				None: NO DI Water: H ₂ O
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT			Cool: Cool MeOH: Me
Sampler's Name:	Yocoly Eddy Konan	TAT starts the day received by the lab, if received by 4:30pm				HCL: HC HNO ₃ : HN
CC #:	1061092601	Temp Blank:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wet Ice:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	H ₂ SO ₄ : H ₂
SAMPLE RECEIPT		Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	100003	H ₃ PO ₄ : HP
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Correction Factor:	N/A			NaHSO ₄ : NABIS
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Temperature Reading:	8.4			Na ₂ S ₂ O ₃ : NaSO ₃
Total Containers:		Corrected Temperature:	5.7			Zn Acetate+NaOH: Zn



890-3446 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
PH09	S	11.11.22	12:50	0.5'	Grab/	1	X	X	X	
PH09	S	11.11.22	13:00	1'	Grab/	1	X	X	X	Incident ID NAB1728635377

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11.11.22 8:13			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3446-1

SDG Number: Rural Eddy NM

Login Number: 3446

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3446-1

SDG Number: Rural Eddy NM

Login Number: 3446

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 11/15/22 11:14 AM

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

Eurofins Carlsbad**Job Notes**

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
11/23/2022 1:43:28 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/21/2022 5:28:57 PM

JOB DESCRIPTION

RDX 9-1
SDG NUMBER Rural Eddy NM

JOB NUMBER

890-3444-1

Client: Ensolum
Project/Site: RDX 9-1

Laboratory Job ID: 890-3444-1
SDG: Rural Eddy NM

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Definitions/Glossary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Job ID: 890-3444-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3444-1****Receipt**

The samples were received on 11/14/2022 8:13 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH10 (890-3444-1) and PH10 (890-3444-2).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-39696 and analytical batch 880-39930 was outside the upper control limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-39722 and analytical batch 880-39930 was outside the upper control limits.

Method 8021B: The method blank for preparation batch 880-39696 and analytical batch 880-39930 contained m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-39722 and analytical batch 880-39930 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The method blank for preparation batch 880-39722 and analytical batch 880-39930 contained m-Xylene & p-Xylene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-39724 and analytical batch 880-39981 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Client Sample ID: PH10

Lab Sample ID: 890-3444-1

Date Collected: 11/11/22 13:10

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/16/22 14:31	11/20/22 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				11/16/22 14:31	11/20/22 05:32	1
1,4-Difluorobenzene (Surr)	85		70 - 130				11/16/22 14:31	11/20/22 05:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/21/22 18:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 09:06	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				11/16/22 11:27	11/20/22 18:00	1
o-Terphenyl	105		70 - 130				11/16/22 11:27	11/20/22 18:00	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1030		4.98		mg/Kg			11/19/22 15:54	1

Client Sample ID: PH10

Lab Sample ID: 890-3444-2

Date Collected: 11/11/22 13:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/16/22 14:31	11/20/22 05:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				11/16/22 14:31	11/20/22 05:58	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Client Sample ID: PH10

Lab Sample ID: 890-3444-2

Date Collected: 11/11/22 13:20

Matrix: Solid

Date Received: 11/14/22 08:13

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130	11/16/22 14:31	11/20/22 05:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/21/22 18:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/21/22 09:06	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	11/16/22 11:27	11/20/22 18:20	1
o-Terphenyl	115		70 - 130	11/16/22 11:27	11/20/22 18:20	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1800		25.2		mg/Kg			11/19/22 16:00	5

Surrogate Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-21638-A-1-A MS	Matrix Spike	81	90
880-21638-A-1-B MSD	Matrix Spike Duplicate	104	94
890-3444-1	PH10	104	85
890-3444-2	PH10	111	99
LCS 880-39722/1-A	Lab Control Sample	113	92
LCSD 880-39722/2-A	Lab Control Sample Dup	95	94
MB 880-39696/5-A	Method Blank	66 S1-	89
MB 880-39722/5-A	Method Blank	69 S1-	91
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-21603-A-61-D MS	Matrix Spike	82	78
880-21603-A-61-E MSD	Matrix Spike Duplicate	83	80
890-3444-1	PH10	96	105
890-3444-2	PH10	103	115
LCS 880-39724/2-A	Lab Control Sample	84	93
LCSD 880-39724/3-A	Lab Control Sample Dup	83	93
MB 880-39724/1-A	Method Blank	100	117
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-39696/5-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/16/22 10:35	11/19/22 06:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/16/22 10:35	11/19/22 06:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/16/22 10:35	11/19/22 06:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/16/22 10:35	11/19/22 06:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	11/16/22 10:35	11/19/22 06:32	1
1,4-Difluorobenzene (Surr)	89		70 - 130	11/16/22 10:35	11/19/22 06:32	1

Lab Sample ID: MB 880-39722/5-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/16/22 14:31	11/19/22 20:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/16/22 14:31	11/19/22 20:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/16/22 14:31	11/19/22 20:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/16/22 14:31	11/19/22 20:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/16/22 14:31	11/19/22 20:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/16/22 14:31	11/19/22 20:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130	11/16/22 14:31	11/19/22 20:05	1
1,4-Difluorobenzene (Surr)	91		70 - 130	11/16/22 14:31	11/19/22 20:05	1

Lab Sample ID: LCS 880-39722/1-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08735		mg/Kg		87	70 - 130
Toluene	0.100	0.09484		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.08020		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	0.200	0.1782		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08946		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-39722/2-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39722

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08926		mg/Kg		89	70 - 130	2	35

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-39722/2-A

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39722

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08918		mg/Kg		89	70 - 130	6	35
Ethylbenzene	0.100	0.08323		mg/Kg		83	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1763		mg/Kg		88	70 - 130	1	35
o-Xylene	0.100	0.08097		mg/Kg		81	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-21638-A-1-A MS

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.0996	0.009060	F1	mg/Kg		9	70 - 130
Toluene	<0.00200	U F1 F2	0.0996	0.006781	F1	mg/Kg		7	70 - 130
Ethylbenzene	<0.00200	U F1 F2	0.0996	0.009392	F1	mg/Kg		9	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.199	0.02431	F1	mg/Kg		11	70 - 130
o-Xylene	<0.00200	U F1 F2	0.0996	0.01365	F1	mg/Kg		14	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	81		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: 880-21638-A-1-B MSD

Matrix: Solid

Analysis Batch: 39930

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39722

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0996	0.06861	F1 F2	mg/Kg		69	70 - 130	153	35
Toluene	<0.00200	U F1 F2	0.0996	0.05867	F1 F2	mg/Kg		59	70 - 130	159	35
Ethylbenzene	<0.00200	U F1 F2	0.0996	0.05768	F1 F2	mg/Kg		58	70 - 130	144	35
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.199	0.1185	F1 F2	mg/Kg		59	70 - 130	132	35
o-Xylene	<0.00200	U F1 F2	0.0996	0.06295	F1 F2	mg/Kg		63	70 - 130	129	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-39724/1-A

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39724

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 08:13	1

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-39724/1-A

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 39724

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 08:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/16/22 11:27	11/20/22 08:13	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				11/16/22 11:27	11/20/22 08:13	1
o-Terphenyl	117		70 - 130				11/16/22 11:27	11/20/22 08:13	1

Lab Sample ID: LCS 880-39724/2-A

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 39724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	939.9		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	997.2		mg/Kg		100	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	84		70 - 130				
o-Terphenyl	93		70 - 130				

Lab Sample ID: LCSD 880-39724/3-A

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39724

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	907.7		mg/Kg		91	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	962.3		mg/Kg		96	70 - 130	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	83		70 - 130						
o-Terphenyl	93		70 - 130						

Lab Sample ID: 880-21603-A-61-D MS

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 39724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	997	1507	F1	mg/Kg		146	70 - 130
Diesel Range Organics (Over C10-C28)	177		997	1003		mg/Kg		83	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	82		70 - 130						
o-Terphenyl	78		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-21603-A-61-E MSD

Matrix: Solid

Analysis Batch: 39981

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 39724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	1706	F1	mg/Kg		166	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	177		999	1017		mg/Kg		84	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	83		70 - 130								
o-Terphenyl	80		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-39710/1-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/19/22 14:23	1

Lab Sample ID: LCS 880-39710/2-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	259.5		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-39710/3-A

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	256.0		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-3444-2 MS

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: PH10

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1800		1260	3101		mg/Kg		103	90 - 110

Lab Sample ID: 890-3444-2 MSD

Matrix: Solid

Analysis Batch: 39996

Client Sample ID: PH10

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1800		1260	3109		mg/Kg		104	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

GC VOA

Prep Batch: 39696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-39696/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 39722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	5035	
890-3444-2	PH10	Total/NA	Solid	5035	
MB 880-39722/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-39722/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-39722/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21638-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-21638-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 39930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	8021B	39722
890-3444-2	PH10	Total/NA	Solid	8021B	39722
MB 880-39696/5-A	Method Blank	Total/NA	Solid	8021B	39696
MB 880-39722/5-A	Method Blank	Total/NA	Solid	8021B	39722
LCS 880-39722/1-A	Lab Control Sample	Total/NA	Solid	8021B	39722
LCSD 880-39722/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	39722
880-21638-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	39722
880-21638-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	39722

Analysis Batch: 40149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	Total BTEX	
890-3444-2	PH10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 39724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	8015NM Prep	
890-3444-2	PH10	Total/NA	Solid	8015NM Prep	
MB 880-39724/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-39724/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-39724/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-21603-A-61-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-21603-A-61-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 39981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	8015B NM	39724
890-3444-2	PH10	Total/NA	Solid	8015B NM	39724
MB 880-39724/1-A	Method Blank	Total/NA	Solid	8015B NM	39724
LCS 880-39724/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	39724
LCSD 880-39724/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	39724
880-21603-A-61-D MS	Matrix Spike	Total/NA	Solid	8015B NM	39724
880-21603-A-61-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	39724

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QC Association Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

GC Semi VOA

Analysis Batch: 40045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Total/NA	Solid	8015 NM	
890-3444-2	PH10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 39710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Soluble	Solid	DI Leach	
890-3444-2	PH10	Soluble	Solid	DI Leach	
MB 880-39710/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-39710/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-39710/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3444-2 MS	PH10	Soluble	Solid	DI Leach	
890-3444-2 MSD	PH10	Soluble	Solid	DI Leach	

Analysis Batch: 39996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3444-1	PH10	Soluble	Solid	300.0	39710
890-3444-2	PH10	Soluble	Solid	300.0	39710
MB 880-39710/1-A	Method Blank	Soluble	Solid	300.0	39710
LCS 880-39710/2-A	Lab Control Sample	Soluble	Solid	300.0	39710
LCSD 880-39710/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	39710
890-3444-2 MS	PH10	Soluble	Solid	300.0	39710
890-3444-2 MSD	PH10	Soluble	Solid	300.0	39710

Lab Chronicle

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Client Sample ID: PH10
Date Collected: 11/11/22 13:10
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3444-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	39722	11/16/22 14:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/20/22 05:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40149	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			40045	11/21/22 09:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	39724	11/16/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39981	11/20/22 18:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	39710	11/16/22 10:47	KS	EET MID
Soluble	Analysis	300.0		1			39996	11/19/22 15:54	CH	EET MID

Client Sample ID: PH10
Date Collected: 11/11/22 13:20
Date Received: 11/14/22 08:13

Lab Sample ID: 890-3444-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	39722	11/16/22 14:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	39930	11/20/22 05:58	SM	EET MID
Total/NA	Analysis	Total BTEX		1			40149	11/21/22 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			40045	11/21/22 09:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	39724	11/16/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	39981	11/20/22 18:20	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	39710	11/16/22 10:47	KS	EET MID
Soluble	Analysis	300.0		5			39996	11/19/22 16:00	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: RDX 9-1

Job ID: 890-3444-1
SDG: Rural Eddy NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3444-1	PH10	Solid	11/11/22 13:10	11/14/22 08:13	0.5
890-3444-2	PH10	Solid	11/11/22 13:20	11/14/22 08:13	1

- 1
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- 15



Environment Testing

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 986-3199

Chain of Custody

Work Order No:

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@Ensolum.com, jim.raley@dyn.com

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

[illegible][illegible]

Total 200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn		
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP		6010:	8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U	Hq: 1631 / 245.1 / 7470 / 7471													

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11-14-22 5:13			
2						
3						
4						
5						
6						

Revised Date: 08/25/2020 Row: 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3444-1

SDG Number: Rural Eddy NM

Login Number: 3444

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3444-1

SDG Number: Rural Eddy NM

Login Number: 3444

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 11/15/22 11:14 AM

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

Eurofins Carlsbad**Job Notes**

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

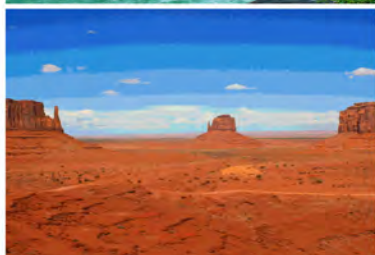
Authorization

Generated
11/21/2022 5:28:57 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Report to:

Gilbert Moreno



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E303132

Job Number: 01058-0007

Received: 3/30/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
4/5/23

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: 4/5/23

Gilbert Moreno
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E303132
Date Received: 3/30/2023 7:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/30/2023 7:00:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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,

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Laboratory Director
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Cell: 775-287-1762
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Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name:	RDX 9-1	Reported: 04/05/23 14:44
	Project Number:	01058-0007	
	Project Manager:	Gilbert Moreno	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 4'	E303132-01A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS02 4'	E303132-02A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS03 4'	E303132-03A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS04 4'	E303132-04A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS05 4'	E303132-05A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS06 4'	E303132-06A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS07 4'	E303132-07A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS08 4'	E303132-08A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS09 4'	E303132-09A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS10 4'	E303132-10A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
FS11 4'	E303132-11A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS12 4'	E303132-12A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS13 4'	E303132-13A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS14 4'	E303132-14A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS15 4'	E303132-15A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS16 4'	E303132-16A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS17 4'	E303132-17A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS18 4'	E303132-18A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS19 4'	E303132-19A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS20 4'	E303132-20A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS21 4'	E303132-21A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS22 4'	E303132-22A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS23 4'	E303132-23A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS24 4'	E303132-24A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS25 4'	E303132-25A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS26 4'	E303132-26A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS27 4'	E303132-27A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
FS28 4'	E303132-28A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS01 4'

E303132-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		103 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		121 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		105 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		103 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		121 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		105 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane		101 %	50-200	03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	1490	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS02 4'

E303132-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.4 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	119 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	100 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.4 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	119 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	100 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	98.4 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	1640	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS03 4'

E303132-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	97.0 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	116 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	97.0 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	116 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	57.1	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	79.6	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	98.3 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	4880	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS04 4'

E303132-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		102 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		102 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	42.7	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	87.3	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane		101 %	50-200	03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	4870	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS05 4'

E303132-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		113 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		102 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		113 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		102 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane		98.9 %	50-200	03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	3660	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS06 4'

E303132-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	94.9 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	3990	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS07 4'

E303132-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		113 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		103 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		113 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		103 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	41.8	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	63.5	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane		102 %	50-200	03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	4180	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS08 4'

E303132-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	117	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	125	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	98.5 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	4820	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS09 4'

E303132-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	99.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	99.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	75.4	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	96.5	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	98.8 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	5210	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS10 4'

E303132-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	103 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	1200	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS11 4'

E303132-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		114 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		104 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4		114 %	70-130	03/30/23	03/30/23	
Surrogate: Toluene-d8		104 %	70-130	03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane		101 %	50-200	03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	3050	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS12 4'

E303132-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	96.5 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	96.5 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	104 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	2830	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS13 4'

E303132-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	107 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	107 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	102 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	2870	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS14 4'

E303132-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	97.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	97.3 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	101 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	1350	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS15 4'

E303132-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/30/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/30/23	
Toluene	ND	0.0250	1	03/30/23	03/30/23	
o-Xylene	ND	0.0250	1	03/30/23	03/30/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/30/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	95.6 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/30/23	
Surrogate: Bromofluorobenzene	95.6 %	70-130		03/30/23	03/30/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		03/30/23	03/30/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	102 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	65.5	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS16 4'

E303132-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	97.2 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	97.2 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	102 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	627	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS17 4'

E303132-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	97.4 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	97.4 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	105 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	881	20.0	1	03/31/23	04/01/23	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX 9-1 Project Number: 01058-0007 Project Manager: Gilbert Moreno	Reported: 4/5/2023 2:44:42PM
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FS18 4'
E303132-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	95.5 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	95.5 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	103 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	98.1 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	2760	40.0	2	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS19 4'

E303132-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	95.2 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	107 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	95.2 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	107 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	105 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	306	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS20 4'

E303132-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313056
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2313050
Diesel Range Organics (C10-C28)	ND	25.0	1	03/30/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/30/23	04/04/23	
Surrogate: n-Nonane	109 %	50-200		03/30/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313091
Chloride	321	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS21 4'

E303132-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	94.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	94.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	106 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	289	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS22 4'

E303132-22

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	91.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	93.5 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	91.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	93.5 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	101 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	342	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS23 4'

E303132-23

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	106 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	106 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	107 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	788	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS24 4'

E303132-24

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	95.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	95.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	105 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	108 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	801	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS25 4'

E303132-25

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.0 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.1 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.0 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.1 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	108 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	774	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS26 4'

E303132-26

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	92.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	105 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	1390	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS27 4'

E303132-27

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	97.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	97.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	107 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	1400	20.0	1	03/31/23	04/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 2:44:42PM

FS28 4'

E303132-28

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313054
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	93.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	104 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2313085
Diesel Range Organics (C10-C28)	ND	25.0	1	03/31/23	04/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	03/31/23	04/01/23	
Surrogate: n-Nonane	108 %	50-200		03/31/23	04/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313092
Chloride	1400	20.0	1	03/31/23	04/01/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313054-BLK1)

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.459		0.500		91.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.469		0.500		93.8	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			

LCS (2313054-BS1)

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.24	0.0250	2.50		89.6	70-130			
Ethylbenzene	2.29	0.0250	2.50		91.7	70-130			
Toluene	2.29	0.0250	2.50		91.6	70-130			
o-Xylene	2.31	0.0250	2.50		92.5	70-130			
p,m-Xylene	4.62	0.0500	5.00		92.4	70-130			
Total Xylenes	6.93	0.0250	7.50		92.4	70-130			
Surrogate: Bromofluorobenzene	0.500		0.500		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.471		0.500		94.2	70-130			
Surrogate: Toluene-d8	0.518		0.500		104	70-130			

Matrix Spike (2313054-MS1)

Source: E303132-22

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.28	0.0250	2.50	ND	91.1	48-131			
Ethylbenzene	2.33	0.0250	2.50	ND	93.0	45-135			
Toluene	2.33	0.0250	2.50	ND	93.2	48-130			
o-Xylene	2.34	0.0250	2.50	ND	93.7	43-135			
p,m-Xylene	4.67	0.0500	5.00	ND	93.4	43-135			
Total Xylenes	7.01	0.0250	7.50	ND	93.5	43-135			
Surrogate: Bromofluorobenzene	0.494		0.500		98.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

Matrix Spike Dup (2313054-MSD1)

Source: E303132-22

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.25	0.0250	2.50	ND	90.2	48-131	0.993	23	
Ethylbenzene	2.31	0.0250	2.50	ND	92.2	45-135	0.842	27	
Toluene	2.28	0.0250	2.50	ND	91.2	48-130	2.15	24	
o-Xylene	2.32	0.0250	2.50	ND	92.7	43-135	1.07	27	
p,m-Xylene	4.61	0.0500	5.00	ND	92.1	43-135	1.34	27	
Total Xylenes	6.92	0.0250	7.50	ND	92.3	43-135	1.25	27	
Surrogate: Bromofluorobenzene	0.487		0.500		97.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		94.9	70-130			
Surrogate: Toluene-d8	0.512		0.500		102	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

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

Blank (2313056-BLK1)

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.494		0.500		98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.565		0.500		113	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

LCS (2313056-BS1)

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.52	0.0250	2.50		101	70-130			
Ethylbenzene	2.50	0.0250	2.50		100	70-130			
Toluene	2.59	0.0250	2.50		103	70-130			
o-Xylene	2.53	0.0250	2.50		101	70-130			
p,m-Xylene	5.04	0.0500	5.00		101	70-130			
Total Xylenes	7.57	0.0250	7.50		101	70-130			
Surrogate: Bromofluorobenzene	0.527		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.551		0.500		110	70-130			
Surrogate: Toluene-d8	0.518		0.500		104	70-130			

Matrix Spike (2313056-MS1)

Source: E303132-02

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.51	0.0250	2.50	ND	101	48-131			
Ethylbenzene	2.47	0.0250	2.50	ND	98.9	45-135			
Toluene	2.53	0.0250	2.50	ND	101	48-130			
o-Xylene	2.47	0.0250	2.50	ND	98.6	43-135			
p,m-Xylene	4.94	0.0500	5.00	ND	98.7	43-135			
Total Xylenes	7.40	0.0250	7.50	ND	98.7	43-135			
Surrogate: Bromofluorobenzene	0.526		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.556		0.500		111	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

Matrix Spike Dup (2313056-MSD1)

Source: E303132-02

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.57	0.0250	2.50	ND	103	48-131	2.36	23	
Ethylbenzene	2.50	0.0250	2.50	ND	100	45-135	1.23	27	
Toluene	2.55	0.0250	2.50	ND	102	48-130	0.610	24	
o-Xylene	2.52	0.0250	2.50	ND	101	43-135	2.01	27	
p,m-Xylene	5.04	0.0500	5.00	ND	101	43-135	2.05	27	
Total Xylenes	7.55	0.0250	7.50	ND	101	43-135	2.03	27	
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.547		0.500		109	70-130			
Surrogate: Toluene-d8	0.508		0.500		102	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313054-BLK1)

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.459		0.500		91.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.469		0.500		93.8	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			

LCS (2313054-BS2)

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	51.7	20.0	50.0		103	70-130			
Surrogate: Bromofluorobenzene	0.477		0.500		95.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.471		0.500		94.2	70-130			
Surrogate: Toluene-d8	0.519		0.500		104	70-130			

Matrix Spike (2313054-MS2)

Source: E303132-22

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	51.6	20.0	50.0	ND	103	70-130			
Surrogate: Bromofluorobenzene	0.486		0.500		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.472		0.500		94.3	70-130			
Surrogate: Toluene-d8	0.520		0.500		104	70-130			

Matrix Spike Dup (2313054-MSD2)

Source: E303132-22

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	53.2	20.0	50.0	ND	106	70-130	3.08	20	
Surrogate: Bromofluorobenzene	0.482		0.500		96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.472		0.500		94.3	70-130			
Surrogate: Toluene-d8	0.522		0.500		104	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313056-BLK1)

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.494		0.500		98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.565		0.500		113	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

LCS (2313056-BS2)

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	52.5	20.0	50.0		105	70-130			
Surrogate: Bromofluorobenzene	0.514		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.524		0.500		105	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			

Matrix Spike (2313056-MS2)

Source: E303132-02

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	51.7	20.0	50.0	ND	103	70-130			
Surrogate: Bromofluorobenzene	0.525		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.545		0.500		109	70-130			
Surrogate: Toluene-d8	0.526		0.500		105	70-130			

Matrix Spike Dup (2313056-MSD2)

Source: E303132-02

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	52.1	20.0	50.0	ND	104	70-130	0.692	20	
Surrogate: Bromofluorobenzene	0.515		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.541		0.500		108	70-130			
Surrogate: Toluene-d8	0.522		0.500		104	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

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 (2313050-BLK1)					Prepared: 03/30/23 Analyzed: 04/04/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	53.0		50.0		106	50-200			

LCS (2313050-BS1)					Prepared: 03/30/23 Analyzed: 04/04/23				
Diesel Range Organics (C10-C28)	285	25.0	250		114	38-132			
Surrogate: n-Nonane	50.1		50.0		100	50-200			

Matrix Spike (2313050-MS1)					Source: E303132-10		Prepared: 03/30/23 Analyzed: 04/04/23		
Diesel Range Organics (C10-C28)	285	25.0	250	ND	114	38-132			
Surrogate: n-Nonane	45.8		50.0		91.5	50-200			

Matrix Spike Dup (2313050-MSD1)					Source: E303132-10		Prepared: 03/30/23 Analyzed: 04/04/23		
Diesel Range Organics (C10-C28)	287	25.0	250	ND	115	38-132	0.582	20	
Surrogate: n-Nonane	48.4		50.0		96.9	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

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 (2313085-BLK1)					Prepared: 03/31/23 Analyzed: 03/31/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	54.7		50.0		109	50-200			

LCS (2313085-BS1)					Prepared: 03/31/23 Analyzed: 03/31/23				
Diesel Range Organics (C10-C28)	284	25.0	250		114	38-132			
Surrogate: n-Nonane	53.7		50.0		107	50-200			

Matrix Spike (2313085-MS1)					Source: E303125-03		Prepared: 03/31/23 Analyzed: 03/31/23		
Diesel Range Organics (C10-C28)	281	25.0	250	ND	112	38-132			
Surrogate: n-Nonane	50.8		50.0		102	50-200			

Matrix Spike Dup (2313085-MSD1)					Source: E303125-03		Prepared: 03/31/23 Analyzed: 03/31/23		
Diesel Range Organics (C10-C28)	283	25.0	250	ND	113	38-132	0.763	20	
Surrogate: n-Nonane	50.9		50.0		102	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2313091-BLK1)					Prepared: 03/31/23 Analyzed: 04/01/23				
Chloride	ND	20.0							
LCS (2313091-BS1)					Prepared: 03/31/23 Analyzed: 04/01/23				
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2313091-MS1)					Source: E303132-01		Prepared: 03/31/23 Analyzed: 04/01/23		
Chloride	1740	20.0	250	1490	101	80-120			
Matrix Spike Dup (2313091-MSD1)					Source: E303132-01		Prepared: 03/31/23 Analyzed: 04/01/23		
Chloride	1770	20.0	250	1490	113	80-120	1.71	20	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 2:44:42PM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313092-BLK1)					Prepared: 03/31/23 Analyzed: 04/01/23				
Chloride	ND	20.0							
LCS (2313092-BS1)					Prepared: 03/31/23 Analyzed: 04/01/23				
Chloride	266	20.0	250		107	90-110			
Matrix Spike (2313092-MS1)					Source: E303132-21		Prepared: 03/31/23 Analyzed: 04/01/23		
Chloride	574	20.0	250	289	114	80-120			
Matrix Spike Dup (2313092-MSD1)					Source: E303132-21		Prepared: 03/31/23 Analyzed: 04/01/23		
Chloride	574	20.0	250	289	114	80-120	0.127	20	

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



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	04/05/23 14:44

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

Page 1 of 3

Client: WPX Permian Energy, LLC		Bill To		Lab Use Only		TAT			EPA Program				
Project: RDX 9-1		Attention: Jim Raley		Lab WO# E 303132		Job Number 01058-0007		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Gilbert Moreno		Address: 5315 Buena Vista Dr.									5 Day TAT		
Address: 3122 National Parks HWY		City, State, Zip: Carlsbad, NM, 88220											RCRA
City, State, Zip: Carlsbad, NM, 88220		Phone: 575-885-7502											
Phone: 832-541-7719		Email: jim.raley@dmv.com											
Email: devon-team@ensolum.com		Cost Center: 1061092601											
Collected by: Yocoly Edyte Konan		Incident ID: nAB1728635377											

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	State	Remarks
15:50	3.27.23	S	1	FS01	1	4'						X			
16:00	3.27.23	S	1	FS02	2	4'						X			
16:10	3.27.23	S	1	FS03	3	4'						X			
16:20	3.27.23	S	1	FS04	4	4'						X			
16:30	3.27.23	S	1	FS05	5	4'						X			
16:40	3.27.23	S	1	FS06	6	4'						X			
16:50	3.27.23	S	1	FS07	7	4'						X			
17:00	3.27.23	S	1	FS08	8	4'						X			
17:10	3.27.23	S	1	FS09	9	4'						X			
17:20	3.27.23	S	1	FS10	10	4'						X			

Additional Instructions:

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

Sampled by: Gilbert Moreno

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) Yocoly Edyte Konan	Date 03/29/23	Time 09:00	Received by: (Signature) Michelle Camacho	Date 3-29-23	Time 0900	Lab Use Only Received on ice: <input checked="" type="checkbox"/> / N T1 _____ T2 _____ T3 _____ AVG Temp °C 4.0
Relinquished by: (Signature) Michelle Camacho	Date 3-29-23	Time 1715	Received by: (Signature) Lorenz Se	Date 3-29-23	Time 1730	
Relinquished by: (Signature) Lorenz Se	Date 3-29-23	Time 2315	Received by: (Signature) Drew Z...	Date 03/30/23	Time 7:00	

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

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

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



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Client: WPX Permian Energy, LLC				Bill To				Lab Use Only				TAT				EPA Program							
Project: RDX 9-1				Attention: Jim Raley				Lab WO# E303132				Job Number 01058-0057				1D	2D	3D	Standard	CWA	SDWA		
Project Manager: Gilbert Moreno				Address: 5315 Buena Vista Dr.															5 Day TAT				
Address: 3122 National Parks HWY				City, State, Zip: Carlsbad, NM, 88220																		RCRA	
City, State, Zip: Carlsbad, NM, 88220				Phone: 575-885-7502																			
Phone: 832-541-7719				Email: jim.raley@dv.com																			
Email: devon-team@ensolum.com				Cost Center: 1061092601																			
Collected by: Yocoly Edyte Konan				Incident ID: nAB1728635377																			

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	State	Remarks
10:50	3.28.23	S	1	FS11	11	4'						X			
11:00	3.28.23	S	1	FS12	12	4'						X			
11:10	3.28.23	S	1	FS13	13	4'						X			
11:20	3.28.23	S	1	FS14	14	4'						X			
11:30	3.28.23	S	1	FS15	15	4'						X			
11:40	3.28.23	S	1	FS16	16	4'						X			
11:50	3.28.23	S	1	FS17	17	4'						X			
12:00	3.28.23	S	1	FS18	18	4'						X			
12:10	3.28.23	S	1	FS19	19	4'						X			
12:20	3.28.23	S	1	FS20	20	4'						X			

Additional Instructions:

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

Sampled by: Gilbert Moreno

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) Yocoly Edyte Konan	Date 03/29/23	Time 09:00	Received by: (Signature) Michelle Gonzalez	Date 3-29-23	Time 0900	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4.0
Relinquished by: (Signature) Michelle Gonzalez	Date 3-29-23	Time 1715	Received by: (Signature) Lorenzo Leri	Date 3-29-23	Time 0730	
Relinquished by: (Signature) Lorenzo Leri	Date 3-29-23	Time 2315	Received by: (Signature) Jene Zazari	Date 03/30/23	Time 7:00	

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

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

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

Client: WPX Permian Energy, LLC				Bill To				Lab Use Only				TAT				EPA Program					
Project: RDX 9-1				Attention: Jim Raley				Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Gilbert Moreno				Address: 5315 Buena Vista Dr.				E303132		01058-0007					5 Day TAT						
Address: 3122 National Parks HWY				City, State, Zip: Carlsbad, NM, 88220				Analysis and Method										RCRA			
City, State, Zip: Carlsbad, NM, 88220				Phone: 575-885-7502				Depth(ft)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	State					
Phone: 832-541-7719				Email: jim.raley@dm.com												NM CO UT AZ TX					
Email: devon-team@ensolum.com				Cost Center: 1061092601												Remarks					
Collected by: Yocoly Edyte Konan				Incident ID: nAB1728635377																	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX								
12:30	3.28.23	S	1	FS21	21	4'						X									
12:40	3.28.23	S	1	FS22	22	4'						X									
12:50	3.28.23	S	1	FS23	23	4'						X									
13:00	3.28.23	S	1	FS24	24	4'						X									
13:10	3.28.23	S	1	FS25	25	4'						X									
13:20	3.28.23	S	1	FS26	26	4'						X									
13:30	3.28.23	S	1	FS27	27	4'						X									
13:40	3.28.23	S	1	FS28	28	4'						X									

Additional Instructions:

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

Sampled by: Gilbert Moreno

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) Yocoly Edyte Konan	Date 03/29/23	Time 09:00	Received by: (Signature) Michelle Gumpels	Date 3-29-23	Time 0900	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4.0</u>
Relinquished by: (Signature) Michelle Gumpels	Date 3-29-23	Time 1715	Received by: (Signature) Lorena Lir	Date 3-29-23	Time 1730	
Relinquished by: (Signature) Lorena Lir	Date 3-29-23	Time 2315	Received by: (Signature) Jenny 3282	Date 03/30/23	Time 7:00	

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

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

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



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Envirotech Analytical Laboratory

Printed: 3/30/2023 10:53:32AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	03/30/23 07:00	Work Order ID:	E303132
Phone:	(539) 573-4018	Date Logged In:	03/29/23 15:41	Logged In By:	Caitlin Christian
Email:	devon-team@ensolum.com	Due Date:	04/05/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

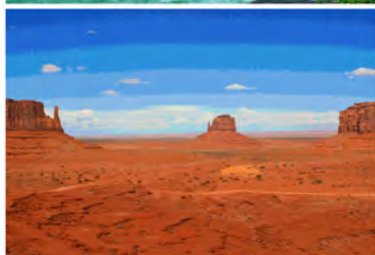
Date



envirotech Inc.

Report to:

Gilbert Moreno



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E303128

Job Number: 01058-0007

Received: 3/30/2023

Revision: 1

Report Reviewed By:

Draft

Walter Hinchman
Laboratory Director
4/5/23

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: 4/5/23

Gilbert Moreno
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E303128
Date Received: 3/30/2023 7:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/30/2023 7:00:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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

Raina Schwanz
Laboratory Administrator
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Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX 9-1 Project Number: 01058-0007 Project Manager: Gilbert Moreno	Reported: 04/05/23 11:01
--------------------------------------------------------------------	----------------------------------------------------------------------------------------	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 0 - 4'	E303128-01A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
SW02 0 - 4'	E303128-02A	Soil	03/27/23	03/30/23	Glass Jar, 2 oz.
SW03 0 - 4'	E303128-03A	Soil	03/28/23	03/30/23	Glass Jar, 32 oz.
SW04 0 - 4'	E303128-04A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW05 0 - 4'	E303128-05A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW06 0 - 4'	E303128-06A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW07 0 - 4'	E303128-07A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW08 0 - 4'	E303128-08A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW09 0 - 4'	E303128-09A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW10 0 - 4'	E303128-10A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.
SW11 0 - 4'	E303128-11A	Soil	03/28/23	03/30/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW01 0 - 4'

E303128-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	103 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	94.2 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	103 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	94.2 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	112	25.0	1	04/03/23	04/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/03/23	
Surrogate: n-Nonane	99.9 %	50-200		04/03/23	04/03/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	378	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW02 0 - 4'

E303128-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	99.1 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.7 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	99.1 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	93.6	25.0	1	04/03/23	04/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/03/23	
Surrogate: n-Nonane	96.7 %	50-200		04/03/23	04/03/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	332	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW03 0 - 4'

E303128-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		96.9 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		99.7 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		96.9 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		99.7 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/03/23	
Surrogate: n-Nonane		103 %	50-200	04/03/23	04/03/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	45.8	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW04 0 - 4'

E303128-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		102 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		98.4 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		102 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		98.4 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/03/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/03/23	
Surrogate: n-Nonane		89.4 %	50-200	04/03/23	04/03/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	44.3	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW05 0 - 4'

E303128-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		98.0 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		98.4 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		100 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		98.0 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		98.4 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane		101 %	50-200	04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	209	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW06 0 - 4'

E303128-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane	104 %	50-200		04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	223	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW07 0 - 4'

E303128-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	89.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	113 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	89.3 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	113 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane	96.7 %	50-200		04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	204	20.0	1	03/30/23	03/31/23	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX 9-1 Project Number: 01058-0007 Project Manager: Gilbert Moreno	Reported: 4/5/2023 11:01:15AM
--------------------------------------------------------------------	----------------------------------------------------------------------------------------	----------------------------------

SW08 0 - 4'
E303128-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.0 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.0 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane	99.3 %	50-200		04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	42.7	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW09 0 - 4'

E303128-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	98.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	98.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	96.6 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	101 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane	96.5 %	50-200		04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	200	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW10 0 - 4'

E303128-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130		03/30/23	03/31/23	
Surrogate: Toluene-d8	102 %	70-130		03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane	97.8 %	50-200		04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	179	20.0	1	03/30/23	03/31/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Gilbert Moreno

Reported:
4/5/2023 11:01:15AM

SW11 0 - 4'

E303128-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Benzene	ND	0.0250	1	03/30/23	03/31/23	
Ethylbenzene	ND	0.0250	1	03/30/23	03/31/23	
Toluene	ND	0.0250	1	03/30/23	03/31/23	
o-Xylene	ND	0.0250	1	03/30/23	03/31/23	
p,m-Xylene	ND	0.0500	1	03/30/23	03/31/23	
Total Xylenes	ND	0.0250	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		99.8 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2313055
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/30/23	03/31/23	
Surrogate: Bromofluorobenzene		101 %	70-130	03/30/23	03/31/23	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	03/30/23	03/31/23	
Surrogate: Toluene-d8		99.8 %	70-130	03/30/23	03/31/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314004
Diesel Range Organics (C10-C28)	ND	25.0	1	04/03/23	04/04/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/03/23	04/04/23	
Surrogate: n-Nonane		102 %	50-200	04/03/23	04/04/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2313060
Chloride	114	20.0	1	03/30/23	03/31/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 11:01:15AM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313055-BLK1)

Prepared: 03/30/23 Analyzed: 03/30/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.504		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.468		0.500		93.6	70-130			
Surrogate: Toluene-d8	0.509		0.500		102	70-130			

LCS (2313055-BS1)

Prepared: 03/30/23 Analyzed: 03/30/23

Benzene	2.27	0.0250	2.50		91.0	70-130			
Ethylbenzene	2.20	0.0250	2.50		88.2	70-130			
Toluene	2.23	0.0250	2.50		89.1	70-130			
o-Xylene	2.31	0.0250	2.50		92.5	70-130			
p,m-Xylene	4.58	0.0500	5.00		91.5	70-130			
Total Xylenes	6.89	0.0250	7.50		91.9	70-130			
Surrogate: Bromofluorobenzene	0.496		0.500		99.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.465		0.500		92.9	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

Matrix Spike (2313055-MS1)

Source: E303128-01

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.31	0.0250	2.50	ND	92.3	48-131			
Ethylbenzene	2.24	0.0250	2.50	ND	89.4	45-135			
Toluene	2.24	0.0250	2.50	ND	89.5	48-130			
o-Xylene	2.33	0.0250	2.50	ND	93.2	43-135			
p,m-Xylene	4.63	0.0500	5.00	ND	92.6	43-135			
Total Xylenes	6.96	0.0250	7.50	ND	92.8	43-135			
Surrogate: Bromofluorobenzene	0.499		0.500		99.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.486		0.500		97.2	70-130			
Surrogate: Toluene-d8	0.512		0.500		102	70-130			

Matrix Spike Dup (2313055-MSD1)

Source: E303128-01

Prepared: 03/30/23 Analyzed: 03/31/23

Benzene	2.31	0.0250	2.50	ND	92.4	48-131	0.108	23	
Ethylbenzene	2.26	0.0250	2.50	ND	90.5	45-135	1.20	27	
Toluene	2.27	0.0250	2.50	ND	91.0	48-130	1.62	24	
o-Xylene	2.38	0.0250	2.50	ND	95.1	43-135	2.04	27	
p,m-Xylene	4.71	0.0500	5.00	ND	94.3	43-135	1.77	27	
Total Xylenes	7.09	0.0250	7.50	ND	94.6	43-135	1.86	27	
Surrogate: Bromofluorobenzene	0.510		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.486		0.500		97.1	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 11:01:15AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313055-BLK1)

Prepared: 03/30/23 Analyzed: 03/30/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.504		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.468		0.500		93.6	70-130			
Surrogate: Toluene-d8	0.509		0.500		102	70-130			

LCS (2313055-BS2)

Prepared: 03/30/23 Analyzed: 03/30/23

Gasoline Range Organics (C6-C10)	47.4	20.0	50.0		94.9	70-130			
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.481		0.500		96.2	70-130			
Surrogate: Toluene-d8	0.517		0.500		103	70-130			

Matrix Spike (2313055-MS2)

Source: E303128-01

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	49.8	20.0	50.0	ND	99.5	70-130			
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.487		0.500		97.4	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			

Matrix Spike Dup (2313055-MSD2)

Source: E303128-01

Prepared: 03/30/23 Analyzed: 03/31/23

Gasoline Range Organics (C6-C10)	49.5	20.0	50.0	ND	99.0	70-130	0.518	20	
Surrogate: Bromofluorobenzene	0.515		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.487		0.500		97.4	70-130			
Surrogate: Toluene-d8	0.510		0.500		102	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 11:01:15AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

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 (2314004-BLK1)					Prepared: 04/03/23 Analyzed: 04/03/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	59.5		50.0		119	50-200			

LCS (2314004-BS1)					Prepared: 04/03/23 Analyzed: 04/03/23				
Diesel Range Organics (C10-C28)	316	25.0	250		127	38-132			
Surrogate: n-Nonane	56.5		50.0		113	50-200			

Matrix Spike (2314004-MS1)					Source: E303128-06		Prepared: 04/03/23 Analyzed: 04/03/23		
Diesel Range Organics (C10-C28)	290	25.0	250	ND	116	38-132			
Surrogate: n-Nonane	48.6		50.0		97.1	50-200			

Matrix Spike Dup (2314004-MSD1)					Source: E303128-06		Prepared: 04/03/23 Analyzed: 04/03/23		
Diesel Range Organics (C10-C28)	284	25.0	250	ND	113	38-132	2.21	20	
Surrogate: n-Nonane	50.0		50.0		100	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	4/5/2023 11:01:15AM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2313060-BLK1)					Prepared: 03/30/23 Analyzed: 03/31/23				
Chloride	ND	20.0							
LCS (2313060-BS1)					Prepared: 03/30/23 Analyzed: 04/03/23				
Chloride	257	20.0	250		103	90-110			
Matrix Spike (2313060-MS1)					Source: E303127-01		Prepared: 03/30/23 Analyzed: 04/03/23		
Chloride	263	20.0	250	ND	105	80-120			
Matrix Spike Dup (2313060-MSD1)					Source: E303127-01		Prepared: 03/30/23 Analyzed: 04/03/23		
Chloride	264	20.0	250	ND	106	80-120	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

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	04/05/23 11:01

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

Page 1 of 2

Client: WPX Permian Energy, LLC		Bill To		Lab Use Only		TAT			EPA Program				
Project: RDX 9-1		Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Gilbert Moreno		Address: 5315 Buena Vista Dr.		E303128		01058-007					5 Day TAT		
Address: 3122 National Parks HWY		City, State, Zip: Carlsbad, NM, 88220										RCRA	
City, State, Zip: Carlsbad, NM, 88220		Phone: 575-885-7502											
Phone: 832-541-7719		Email: jim.raley@dv.com											
Email: devon-team@ensolum.com		Cost Center: 1061092601											
Collected by: Yocoly Edyte Konan		Incident ID: nAB1728635377											

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth(ft)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	State	Remarks
15:30	3.27.23	S	1	SW01	1	0 - 4'						X			
15:40	3.27.23	S	1	SW02	2	0 - 4'						X			
9:20	3.28.23	S	1	SW03	3	0 - 4'						X			
9:30	3.28.23	S	1	SW04	4	0 - 4'						X			
9:40	3.28.23	S	1	SW05	5	0 - 4'						X			
9:50	3.28.23	S	1	SW06	6	0 - 4'						X			
10:00	3.28.23	S	1	SW07	7	0 - 4'						X			
10:10	3.28.23	S	1	SW08	8	0 - 4'						X			
10:20	3.28.23	S	1	SW09	9	0 - 4'						X			
10:30	3.28.23	S	1	SW10	10	0 - 4'						X			

Additional Instructions:

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

Sampled by: Gilbert Moreno

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) Yocoly Edyte Konan	Date 3/23/23	Time 09:00	Received by: (Signature) Michelle Campala	Date 3-29-23	Time 0900	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4.0
Relinquished by: (Signature) Michelle Campala	Date 3-29-23	Time 1715	Received by: (Signature) Lorena Lewis	Date 3-29-23	Time 1730	
Relinquished by: (Signature) Lorena Lewis	Date 3-29-23	Time 2315	Received by: (Signature) Jenni Zazz	Date 03/30/23	Time 7:00	

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

Project Information

Chain of Custody

Page 2 of 2

[illegible]

Additional Instructions:

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

Sampled by: Gilbert Moreno

Sampled by: Gilbert Moreno

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) Yocoly Edyte Konan	Date 3/29/23	Time 09:00	Received by: (Signature) Michelle Gungl	Date 3-29-23	Time 0900	Lab Use Only Received on ice: <u>Y</u> / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4.0</u>
Relinquished by: (Signature) Michelle Gungl	Date 3-29-23	Time 1715	Received by: (Signature) Lorenzo Feri	Date 3-29-23	Time 1738	
Relinquished by: (Signature) Lorenzo Feri	Date 3-29-23	Time 2315	Received by: (Signature) Drene Zier	Date 03/30/23	Time 7:00	
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: 3/30/2023 10:37:36AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	03/30/23 07:00	Work Order ID:	E303128
Phone:	(539) 573-4018	Date Logged In:	03/29/23 15:19	Logged In By:	Caitlin Christian
Email:	devon-team@ensolum.com	Due Date:	04/05/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

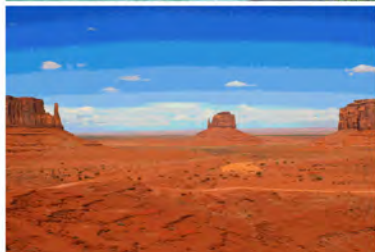
Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Devon Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E304179

Job Number: 01058-0007

Received: 4/25/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
5/1/23

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: 5/1/23

Ashley Giovengo
6488 7 Rivers Hwy
Artesia, NM 88210



Project Name: RDX 9-1
Workorder: E304179
Date Received: 4/25/2023 10:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/25/2023 10:30:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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

Raina Schwanz
Laboratory Administrator
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Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	05/01/23 13:08

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH01	E304179-01A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH01B	E304179-02A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH02	E304179-03A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH02B	E304179-04A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH02D	E304179-05A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH02F	E304179-06A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH04	E304179-07A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH04A	E304179-08A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH04C	E304179-09A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH05	E304179-10A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH05B	E304179-11A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH05D	E304179-12A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH06	E304179-13A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH06B	E304179-14A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH06D	E304179-15A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07	E304179-16A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07B	E304179-17A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07D	E304179-18A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07F	E304179-19A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07H	E304179-20A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH07K	E304179-21A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH08	E304179-22A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.
PH08B	E304179-23A	Soil	04/20/23	04/25/23	Glass Jar, 4 oz.



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH01

E304179-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/27/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/27/23	
Toluene	ND	0.0250	1	04/26/23	04/27/23	
o-Xylene	ND	0.0250	1	04/26/23	04/27/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/27/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	106 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	99.9 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	106 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	99.9 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane	89.6 %	50-200		04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	788	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH01B

E304179-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/27/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/27/23	
Toluene	ND	0.0250	1	04/26/23	04/27/23	
o-Xylene	ND	0.0250	1	04/26/23	04/27/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/27/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene		107 %	70-130	04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/27/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene		107 %	70-130	04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/27/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		81.1 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	ND	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH02

E304179-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		75.3 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	101	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH02B

E304179-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		95.5 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	1780	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH02D

E304179-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.1 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.1 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		78.3 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	1550	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH02F

E304179-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		89.7 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	110	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH04

E304179-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.9 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.9 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		79.7 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	3140	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH04A

E304179-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.4 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.4 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		77.6 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	673	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH04C

E304179-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		74.5 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	268	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH05

E304179-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.5 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.5 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		80.5 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	ND	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH05B

E304179-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane		83.1 %	50-200	04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	ND	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH05D

E304179-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		111 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		104 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		111 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		80.5 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	105	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH06

E304179-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.0 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.0 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		82.7 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	ND	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH06B

E304179-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		80.4 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	ND	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH06D

E304179-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		100 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		82.5 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	80.3	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07

E304179-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		99.3 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		78.7 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	268	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07B

E304179-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		105 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		110 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		78.9 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	2830	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07D

E304179-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		101 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		82.0 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	1980	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07F

E304179-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.9 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		106 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.9 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	58.2	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	65.7	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		79.4 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	1360	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07H

E304179-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Benzene	ND	0.0250	1	04/26/23	04/28/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/28/23	
Toluene	ND	0.0250	1	04/26/23	04/28/23	
o-Xylene	ND	0.0250	1	04/26/23	04/28/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/28/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.1 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317043
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/28/23	
Surrogate: Bromofluorobenzene		103 %	70-130	04/26/23	04/28/23	
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130	04/26/23	04/28/23	
Surrogate: Toluene-d8		98.1 %	70-130	04/26/23	04/28/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2317036
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/27/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/27/23	
Surrogate: n-Nonane		79.5 %	50-200	04/26/23	04/27/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2317035
Chloride	1260	20.0	1	04/25/23	04/27/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH07K

E304179-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2317038	
Benzene	ND	0.0250	1	04/26/23	04/27/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/27/23	
Toluene	ND	0.0250	1	04/26/23	04/27/23	
o-Xylene	ND	0.0250	1	04/26/23	04/27/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/27/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	93.3 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	100 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2317038	
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	93.3 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	100 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: JL		Batch: 2317040	
Diesel Range Organics (C10-C28)	86.7	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane	89.4 %	50-200		04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2317033	
Chloride	1600	200	10	04/25/23	04/26/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH08

E304179-22

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317038
Benzene	ND	0.0250	1	04/26/23	04/27/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/27/23	
Toluene	ND	0.0250	1	04/26/23	04/27/23	
o-Xylene	ND	0.0250	1	04/26/23	04/27/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/27/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	97.1 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	102 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317038
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	97.1 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	102 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2317040
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane	88.3 %	50-200		04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2317033
Chloride	25.5	20.0	1	04/25/23	04/26/23	



Sample Data

Devon Energy - Carlsbad
6488 7 Rivers Hwy
Artesia NM, 88210

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/1/2023 1:08:55PM

PH08B

E304179-23

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317038
Benzene	ND	0.0250	1	04/26/23	04/27/23	
Ethylbenzene	ND	0.0250	1	04/26/23	04/27/23	
Toluene	ND	0.0250	1	04/26/23	04/27/23	
o-Xylene	ND	0.0250	1	04/26/23	04/27/23	
p,m-Xylene	ND	0.0500	1	04/26/23	04/27/23	
Total Xylenes	ND	0.0250	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	96.0 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	96.1 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	99.6 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2317038
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/26/23	04/27/23	
Surrogate: Bromofluorobenzene	96.0 %	70-130		04/26/23	04/27/23	
Surrogate: 1,2-Dichloroethane-d4	96.1 %	70-130		04/26/23	04/27/23	
Surrogate: Toluene-d8	99.6 %	70-130		04/26/23	04/27/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2317040
Diesel Range Organics (C10-C28)	ND	25.0	1	04/26/23	04/26/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/26/23	04/26/23	
Surrogate: n-Nonane	86.8 %	50-200		04/26/23	04/26/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2317033
Chloride	540	20.0	1	04/25/23	04/26/23	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

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

Blank (2317038-BLK1)

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.492		0.500		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.3	70-130			
Surrogate: Toluene-d8	0.501		0.500		100	70-130			

LCS (2317038-BS1)

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.30	0.0250	2.50		91.9	70-130			
Ethylbenzene	2.20	0.0250	2.50		87.9	70-130			
Toluene	2.21	0.0250	2.50		88.3	70-130			
o-Xylene	2.22	0.0250	2.50		88.9	70-130			
p,m-Xylene	4.41	0.0500	5.00		88.3	70-130			
Total Xylenes	6.64	0.0250	7.50		88.5	70-130			
Surrogate: Bromofluorobenzene	0.493		0.500		98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.502		0.500		100	70-130			
Surrogate: Toluene-d8	0.505		0.500		101	70-130			

Matrix Spike (2317038-MS1)

Source: E304183-05

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.36	0.0250	2.50	ND	94.4	48-131			
Ethylbenzene	2.25	0.0250	2.50	ND	90.1	45-135			
Toluene	2.26	0.0250	2.50	ND	90.5	48-130			
o-Xylene	2.33	0.0250	2.50	ND	93.1	43-135			
p,m-Xylene	4.57	0.0500	5.00	ND	91.4	43-135			
Total Xylenes	6.90	0.0250	7.50	ND	92.0	43-135			
Surrogate: Bromofluorobenzene	0.502		0.500		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.498		0.500		99.5	70-130			
Surrogate: Toluene-d8	0.504		0.500		101	70-130			

Matrix Spike Dup (2317038-MSD1)

Source: E304183-05

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.21	0.0250	2.50	ND	88.3	48-131	6.64	23	
Ethylbenzene	2.21	0.0250	2.50	ND	88.3	45-135	2.11	27	
Toluene	2.18	0.0250	2.50	ND	87.3	48-130	3.53	24	
o-Xylene	2.29	0.0250	2.50	ND	91.4	43-135	1.84	27	
p,m-Xylene	4.48	0.0500	5.00	ND	89.6	43-135	2.01	27	
Total Xylenes	6.76	0.0250	7.50	ND	90.2	43-135	1.95	27	
Surrogate: Bromofluorobenzene	0.488		0.500		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.478		0.500		95.6	70-130			
Surrogate: Toluene-d8	0.494		0.500		98.8	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Volatile Organic Compounds by EPA 8260B

Analyst: SL

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

Blank (2317043-BLK1)

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.514		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.558		0.500		112	70-130			
Surrogate: Toluene-d8	0.493		0.500		98.5	70-130			

LCS (2317043-BS1)

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.44	0.0250	2.50		97.8	70-130			
Ethylbenzene	2.38	0.0250	2.50		95.1	70-130			
Toluene	2.37	0.0250	2.50		94.9	70-130			
o-Xylene	2.35	0.0250	2.50		93.9	70-130			
p,m-Xylene	4.67	0.0500	5.00		93.3	70-130			
Total Xylenes	7.02	0.0250	7.50		93.5	70-130			
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.566		0.500		113	70-130			
Surrogate: Toluene-d8	0.491		0.500		98.2	70-130			

Matrix Spike (2317043-MS1)

Source: E304179-08

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.51	0.0250	2.50	ND	101	48-131			
Ethylbenzene	2.50	0.0250	2.50	ND	100	45-135			
Toluene	2.49	0.0250	2.50	ND	99.7	48-130			
o-Xylene	2.49	0.0250	2.50	ND	99.5	43-135			
p,m-Xylene	4.94	0.0500	5.00	ND	98.8	43-135			
Total Xylenes	7.43	0.0250	7.50	ND	99.1	43-135			
Surrogate: Bromofluorobenzene	0.542		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.542		0.500		108	70-130			
Surrogate: Toluene-d8	0.505		0.500		101	70-130			

Matrix Spike Dup (2317043-MSD1)

Source: E304179-08

Prepared: 04/26/23 Analyzed: 04/27/23

Benzene	2.46	0.0250	2.50	ND	98.5	48-131	2.01	23	
Ethylbenzene	2.40	0.0250	2.50	ND	96.0	45-135	4.14	27	
Toluene	2.41	0.0250	2.50	ND	96.6	48-130	3.20	24	
o-Xylene	2.40	0.0250	2.50	ND	95.9	43-135	3.68	27	
p,m-Xylene	4.74	0.0500	5.00	ND	94.8	43-135	4.19	27	
Total Xylenes	7.14	0.0250	7.50	ND	95.2	43-135	4.02	27	
Surrogate: Bromofluorobenzene	0.547		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.543		0.500		109	70-130			
Surrogate: Toluene-d8	0.501		0.500		100	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2317038-BLK1)

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.492		0.500		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.497		0.500		99.3	70-130			
Surrogate: Toluene-d8	0.501		0.500		100	70-130			

LCS (2317038-BS2)

Prepared: 04/26/23 Analyzed: 04/26/23

Gasoline Range Organics (C6-C10)	45.9	20.0	50.0		91.7	70-130			
Surrogate: Bromofluorobenzene	0.490		0.500		97.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

Matrix Spike (2317038-MS2)

Source: E304183-05

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	45.4	20.0	50.0	ND	90.8	70-130			
Surrogate: Bromofluorobenzene	0.502		0.500		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.6	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

Matrix Spike Dup (2317038-MSD2)

Source: E304183-05

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	43.9	20.0	50.0	ND	87.8	70-130	3.44	20	
Surrogate: Bromofluorobenzene	0.493		0.500		98.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.487		0.500		97.4	70-130			
Surrogate: Toluene-d8	0.512		0.500		102	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2317043-BLK1)

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.514		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.558		0.500		112	70-130			
Surrogate: Toluene-d8	0.493		0.500		98.5	70-130			

LCS (2317043-BS2)

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	45.0	20.0	50.0		90.0	70-130			
Surrogate: Bromofluorobenzene	0.538		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.533		0.500		107	70-130			
Surrogate: Toluene-d8	0.510		0.500		102	70-130			

Matrix Spike (2317043-MS2)

Source: E304179-08

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	47.5	20.0	50.0	ND	95.0	70-130			
Surrogate: Bromofluorobenzene	0.539		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.529		0.500		106	70-130			
Surrogate: Toluene-d8	0.514		0.500		103	70-130			

Matrix Spike Dup (2317043-MSD2)

Source: E304179-08

Prepared: 04/26/23 Analyzed: 04/27/23

Gasoline Range Organics (C6-C10)	49.2	20.0	50.0	ND	98.3	70-130	3.46	20	
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.523		0.500		105	70-130			
Surrogate: Toluene-d8	0.510		0.500		102	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

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 (2317036-BLK1)					Prepared: 04/26/23 Analyzed: 04/26/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	46.4		50.0		92.7	50-200			

LCS (2317036-BS1)					Prepared: 04/26/23 Analyzed: 04/26/23				
Diesel Range Organics (C10-C28)	247	25.0	250		98.8	38-132			
Surrogate: n-Nonane	39.7		50.0		79.4	50-200			

Matrix Spike (2317036-MS1)					Source: E304179-15		Prepared: 04/26/23 Analyzed: 04/26/23		
Diesel Range Organics (C10-C28)	258	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	39.5		50.0		79.0	50-200			

Matrix Spike Dup (2317036-MSD1)					Source: E304179-15		Prepared: 04/26/23 Analyzed: 04/26/23		
Diesel Range Organics (C10-C28)	252	25.0	250	ND	101	38-132	2.44	20	
Surrogate: n-Nonane	40.4		50.0		80.8	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

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 (2317040-BLK1)					Prepared: 04/26/23 Analyzed: 04/26/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	50.7		50.0		101	50-200			

LCS (2317040-BS1)					Prepared: 04/26/23 Analyzed: 04/26/23				
Diesel Range Organics (C10-C28)	246	25.0	250		98.2	38-132			
Surrogate: n-Nonane	44.6		50.0		89.1	50-200			

Matrix Spike (2317040-MS1)					Source: E304179-23		Prepared: 04/26/23 Analyzed: 04/26/23		
Diesel Range Organics (C10-C28)	257	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	43.2		50.0		86.4	50-200			

Matrix Spike Dup (2317040-MSD1)					Source: E304179-23		Prepared: 04/26/23 Analyzed: 04/26/23		
Diesel Range Organics (C10-C28)	257	25.0	250	ND	103	38-132	0.0513	20	
Surrogate: n-Nonane	43.0		50.0		86.1	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Anions by EPA 300.0/9056A

Analyst: RAS

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

Blank (2317033-BLK1)					Prepared: 04/25/23 Analyzed: 04/26/23				
Chloride	ND	20.0							
LCS (2317033-BS1)					Prepared: 04/25/23 Analyzed: 04/26/23				
Chloride	257	20.0	250		103	90-110			
Matrix Spike (2317033-MS1)					Source: E304183-02		Prepared: 04/25/23 Analyzed: 04/26/23		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2317033-MSD1)					Source: E304183-02		Prepared: 04/25/23 Analyzed: 04/26/23		
Chloride	255	20.0	250	ND	102	80-120	0.0912	20	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	5/1/2023 1:08:55PM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2317035-BLK1)					Prepared: 04/25/23 Analyzed: 04/27/23				
Chloride	ND	20.0							
LCS (2317035-BS1)					Prepared: 04/25/23 Analyzed: 04/27/23				
Chloride	248	20.0	250		99.2	90-110			
Matrix Spike (2317035-MS1)					Source: E304179-01		Prepared: 04/25/23 Analyzed: 04/27/23		
Chloride	867	20.0	250	788	31.5	80-120			M2
Matrix Spike Dup (2317035-MSD1)					Source: E304179-01		Prepared: 04/25/23 Analyzed: 04/27/23		
Chloride	951	20.0	250	788	65.1	80-120	9.24	20	M2

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

Devon Energy - Carlsbad	Project Name:	RDX 9-1	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	05/01/23 13:08

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

Page 1 of 3

Client: Devon Energy Project: RDX 9-10 Project Manager: Ashley Givens Address: 3122 Natural Parks Hwy City, State, Zip: Carlsbad NM 88220 Phone: 575-988-6055 Email: a.givens@ps.solum.com Report due by:				Bill To Attention: Jim Raley Address: 5315 Buena Vista Dr City, State, Zip: Carlsbad, NM 88220 Phone: 575-689-7597 Email: jim.raley@dev.com				Lab Use Only Lab WO# E304179 Job Number 10680057				TAT 1D 2D 3D Standard X				EPA Program CWA SDWA RCRA			
Analysis and Method DRO/ORO by 8015 GRO/DRO by 8015 BTEX by 8021 VOC by 8260 Metals 6010 Chloride 300.0 BGDG NM										State NM CO UT AZ TX X				Remarks					
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDGM	1D	2D	3D	Standard	CWA	SDWA	RCRA
1005	4/26/23	S	1	PH01	1														
1115				PH01B	2														
1014				PH02	3														
1017				PH02B	4														
1032				PH02D	5														
1035				PH02F	6														
1230				PH04	7														
1235				PH04A	8														
1243				PH04C	9														
1255				PH05	10														
Additional Instructions: Kepronice, CC Ashley & Jim on sample results.																			
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.												Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.							
Relinquished by: (Signature) <i>[Signature]</i> Date 4/21/23 Time 0730												Received by: (Signature) <i>[Signature]</i> Date 4-24 Time 846							
Relinquished by: (Signature) <i>[Signature]</i> Date 4-24 Time 1600												Received by: (Signature) <i>[Signature]</i> Date 4/24/23 Time 1700							
Relinquished by: (Signature) <i>[Signature]</i> Date 4/24/23 Time 2230												Received by: (Signature) <i>[Signature]</i> Date 4/25/23 Time 10:30							
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other												Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA							
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																			

Project Information

Chain of Custody

Client: Devon Energy Project: RDX 9-1 Project Manager: Ashley G. Overman Address: 3122 National Parks Hwy City, State, Zip: Carlsbad, NM 88220 Phone: 575-988-0055 Email: agiovergo@enslam.com Report due by:				Bill To Attention: Jim Raley Address: 5315 Buena Vista Dr City, State, Zip: Carlsbad, NM 88220 Phone: 575-689-7597 Email: jim.raley@devn.com				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Lab WO#</th> <th colspan="2">Job Number</th> <th colspan="4">TAT</th> <th colspan="2">Standard</th> <th colspan="2">EPA Program</th> </tr> </thead> <tbody> <tr> <td colspan="2">F304179</td> <td colspan="2">1028-0007</td> <td>1D</td> <td>2D</td> <td>3D</td> <td></td> <td>X</td> <td></td> <td>CWA</td> <td>SDWA</td> </tr> <tr> <td colspan="10" style="text-align: center;">Analysis and Method</td> <td colspan="2" style="text-align: center;">RCRA</td> </tr> <tr> <td colspan="10"></td> <td colspan="2" style="text-align: center;">State</td> </tr> <tr> <td>NM</td> <td>CO</td> <td>UT</td> <td>AZ</td> <td>TX</td> <td colspan="7"></td> </tr> <tr> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td colspan="7"></td> </tr> </tbody> </table>										Lab WO#		Job Number		TAT				Standard		EPA Program		F304179		1028-0007		1D	2D	3D		X		CWA	SDWA	Analysis and Method										RCRA												State		NM	CO	UT	AZ	TX								X											
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Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	RGDOC NM	1D	2D	3D	Standard	EPA Program
1254	4/20/23	S	1	PH05B	11												
1302				PH05D	12												
1322				PH06	13												
1326				PH06B	14												
1330				PH06D	15												
1350				PH07A	16												
1352				PH07B	17												
1355				PH07D	18												
1410				PH07F	19												
1415	↓	↓	↓	PH07H	20							↓					

Additional Instructions: Kept on ice, CC Ashley & Jim on sample results.

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. <div style="text-align: right;">Sampled by: Ronni Hayes</div>						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--

Relinquished by: (Signature) _____ Date: 4/21/23 Time: 0730		Received by: (Signature) _____ Date: 4-24 Time: 846		Lab Use Only Received on Ice: Y/N T1 _____ T2 _____ T3 _____ AVG Temp °C 4	
Relinquished by: (Signature) _____ Date: 4-24 Time: 1600		Received by: (Signature) _____ Date: 4/24/23 Time: 1700			
Relinquished by: (Signature) _____ Date: 4/24/23 Time: 2230		Received by: (Signature) _____ Date: 4/25/23 Time: 10:30			

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

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

Project Information

Chain of Custody

Page 3 of 3

Client: <u>Devon Energy</u> Project: <u>RDX 9-1</u> Project Manager: <u>Ashley Giovenio</u> Address: <u>3122 National Park Hwy</u> City, State, Zip: <u>Carlsbad NM 88220</u> Phone: <u>575-988-0655</u> Email: <u>ag.giovenio@ensolum.com</u> Report due by:					Bill To Attention: <u>Jim Raley</u> Address: <u>5315 Buzza Vista Dr</u> City, State, Zip: <u>Carlsbad NM 88220</u> Phone: <u>575-689-7597</u> Email: <u>jim.raley@devon.com</u>					Lab Use Only Lab WO# <u>E304179</u> Job Number <u>01058-0001</u> Analysis and Method DRO/ORO by 8015 GRO/DRO by 8015 BTEX by 8021 VOC by 8260 Metals 6010 Chloride 300.0 <u>B G D C N M</u>					TAT 1D 2D 3D Standard X				EPA Program CWA SDWA RCRA															
Time Sampled 1441 1457 1502					Date Sampled 4/20/23 ↓ ↓					Matrix S ↓ ↓					No. of Containers 1 ↓ ↓					Sample ID PH07K PH08 PH08B					Lab Number 21 22 23					Remarks				
Additional Instructions: <u>Kept on ice, CC Ashley & Jim on sample results.</u>																																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.															Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.																			
Relinquished by: (Signature) <u>[Signature]</u>					Date <u>4/21/23</u> Time <u>0730</u>					Received by: (Signature) <u>[Signature]</u>					Date <u>4-24</u> Time <u>846</u>					Lab Use Only Received on ice: <u>(P) N</u>														
Relinquished by: (Signature) <u>[Signature]</u>					Date <u>4-24</u> Time <u>1600</u>					Received by: (Signature) <u>Andrew Musso</u>					Date <u>4/24/23</u> Time <u>1700</u>					T1 T2 T3														
Relinquished by: (Signature) <u>Andrew Musso</u>					Date <u>4/24/23</u> Time <u>2230</u>					Received by: (Signature) <u>[Signature]</u>					Date <u>4/25/23</u> Time <u>10:30</u>					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

Envirotech Analytical Laboratory

Printed: 4/25/2023 1:35:08PM

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:	Devon Energy - Carlsbad	Date Received:	04/25/23 10:30	Work Order ID:	E304179
Phone:	(505) 382-1211	Date Logged In:	04/25/23 11:56	Logged In By:	Caitlin Christian
Email:	ashley.giovengo@wescominc.com	Due Date:	05/01/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

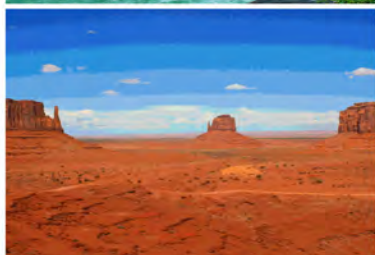
Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Ensolum, LLC

Project Name: RDX 9-1

Work Order: E305076

Job Number: 01058-0007

Received: 5/12/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
5/17/23

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: 5/17/23

Ashley Giovengo
3122 National Parks Hwy
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E305076
Date Received: 5/12/2023 8:20:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/12/2023 8:20:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
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labadmin@envirotech-inc.com

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Cell: 505-320-4759
ljjarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Ensolum, LLC	Project Name:	RDX 9-1	Reported: 05/17/23 09:16
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
PH03 - 2'	E305076-01A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.
PH03 - 4'	E305076-02A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.
PH09 - 2'	E305076-03A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.
PH9 - 4'	E305076-04A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.
PH10 - 2'	E305076-05A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.
PH10 - 4'	E305076-06A	Soil	05/09/23	05/12/23	Glass Jar, 2 oz.



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH03 - 2'

E305076-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: IY		Batch: 2319063	
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.7 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: IY		Batch: 2319063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.9 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: JL		Batch: 2319065	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	76.6 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2319070	
Chloride	1510	20.0	1	05/15/23	05/15/23	



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH03 - 4'

E305076-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.6 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.0 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2319065
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	83.7 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2319070
Chloride	1440	20.0	1	05/15/23	05/15/23	



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH09 - 2'

E305076-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.6 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.4 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2319065
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	87.2 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2319070
Chloride	565	20.0	1	05/15/23	05/15/23	



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH9 - 4'

E305076-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.1 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.4 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2319065
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	89.6 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2319070
Chloride	237	20.0	1	05/15/23	05/15/23	



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH10 - 2'

E305076-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.3 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.9 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2319065
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	82.0 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2319070
Chloride	878	20.0	1	05/15/23	05/15/23	



Sample Data

Ensolum, LLC
3122 National Parks Hwy
Carlsbad NM, 88220

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
5/17/2023 9:16:34AM

PH10 - 4'

E305076-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Benzene	ND	0.0250	1	05/12/23	05/12/23	
Ethylbenzene	ND	0.0250	1	05/12/23	05/12/23	
Toluene	ND	0.0250	1	05/12/23	05/12/23	
o-Xylene	ND	0.0250	1	05/12/23	05/12/23	
p,m-Xylene	ND	0.0500	1	05/12/23	05/12/23	
Total Xylenes	ND	0.0250	1	05/12/23	05/12/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.6 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2319063
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/12/23	05/12/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.3 %	70-130		05/12/23	05/12/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2319065
Diesel Range Organics (C10-C28)	ND	25.0	1	05/12/23	05/12/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/12/23	05/12/23	
<i>Surrogate: n-Nonane</i>						
	91.8 %	50-200		05/12/23	05/12/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2319070
Chloride	395	20.0	1	05/15/23	05/15/23	



QC Summary Data

Ensolum, LLC	Project Name:	RDX 9-1	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	5/17/2023 9:16:34AM

Volatile Organics by EPA 8021B

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 (2319063-BLK1)

Prepared: 05/11/23 Analyzed: 05/12/23

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	7.59		8.00		94.8	70-130			

LCS (2319063-BS1)

Prepared: 05/11/23 Analyzed: 05/12/23

Benzene	4.70	0.0250	5.00		94.0	70-130			
Ethylbenzene	4.89	0.0250	5.00		97.8	70-130			
Toluene	4.98	0.0250	5.00		99.6	70-130			
o-Xylene	5.01	0.0250	5.00		100	70-130			
p,m-Xylene	9.96	0.0500	10.0		99.6	70-130			
Total Xylenes	15.0	0.0250	15.0		99.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.60		8.00		95.0	70-130			

Matrix Spike (2319063-MS1)

Source: E305073-01

Prepared: 05/11/23 Analyzed: 05/12/23

Benzene	4.69	0.0250	5.00	ND	93.7	54-133			
Ethylbenzene	4.91	0.0250	5.00	ND	98.2	61-133			
Toluene	4.97	0.0250	5.00	ND	99.4	61-130			
o-Xylene	5.02	0.0250	5.00	ND	100	63-131			
p,m-Xylene	9.97	0.0500	10.0	ND	99.7	63-131			
Total Xylenes	15.0	0.0250	15.0	ND	99.9	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.59		8.00		94.9	70-130			

Matrix Spike Dup (2319063-MSD1)

Source: E305073-01

Prepared: 05/11/23 Analyzed: 05/12/23

Benzene	4.92	0.0250	5.00	ND	98.4	54-133	4.88	20	
Ethylbenzene	5.14	0.0250	5.00	ND	103	61-133	4.57	20	
Toluene	5.21	0.0250	5.00	ND	104	61-130	4.75	20	
o-Xylene	5.27	0.0250	5.00	ND	105	63-131	4.94	20	
p,m-Xylene	10.4	0.0500	10.0	ND	104	63-131	4.65	20	
Total Xylenes	15.7	0.0250	15.0	ND	105	63-131	4.75	20	
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.1	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 9-1	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	5/17/2023 9:16:34AM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2319063-BLK1) Prepared: 05/11/23 Analyzed: 05/12/23

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

LCS (2319063-BS2) Prepared: 05/11/23 Analyzed: 05/12/23

Gasoline Range Organics (C6-C10)	49.3	20.0	50.0		98.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.68		8.00		96.0	70-130			

Matrix Spike (2319063-MS2) Source: E305073-01 Prepared: 05/11/23 Analyzed: 05/12/23

Gasoline Range Organics (C6-C10)	53.3	20.0	50.0	ND	107	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		8.00		95.2	70-130			

Matrix Spike Dup (2319063-MSD2) Source: E305073-01 Prepared: 05/11/23 Analyzed: 05/12/23

Gasoline Range Organics (C6-C10)	49.0	20.0	50.0	ND	98.0	70-130	8.38	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.62		8.00		95.3	70-130			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 9-1	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	5/17/2023 9:16:34AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

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 (2319065-BLK1) Prepared: 05/12/23 Analyzed: 05/12/23

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	44.6		50.0		89.2	50-200			

LCS (2319065-BS1) Prepared: 05/12/23 Analyzed: 05/12/23

Diesel Range Organics (C10-C28)	249	25.0	250		99.6	38-132			
Surrogate: n-Nonane	42.4		50.0		84.8	50-200			

Matrix Spike (2319065-MS1) Source: E305074-03 Prepared: 05/12/23 Analyzed: 05/12/23

Diesel Range Organics (C10-C28)	275	25.0	250	ND	110	38-132			
Surrogate: n-Nonane	41.3		50.0		82.6	50-200			

Matrix Spike Dup (2319065-MSD1) Source: E305074-03 Prepared: 05/12/23 Analyzed: 05/12/23

Diesel Range Organics (C10-C28)	277	25.0	250	ND	111	38-132	0.794	20	
Surrogate: n-Nonane	40.0		50.0		79.9	50-200			



QC Summary Data

Ensolum, LLC	Project Name:	RDX 9-1	Reported:
3122 National Parks Hwy	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	5/17/2023 9:16:34AM

Anions by EPA 300.0/9056A

Analyst: RAS

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

Blank (2319070-BLK1)					Prepared: 05/15/23 Analyzed: 05/15/23				
Chloride	ND	20.0							
LCS (2319070-BS1)					Prepared: 05/15/23 Analyzed: 05/15/23				
Chloride	250	20.0	250		99.8	90-110			
Matrix Spike (2319070-MS1)					Source: E305050-01		Prepared: 05/15/23 Analyzed: 05/15/23		
Chloride	260	20.0	250	ND	104	80-120			
Matrix Spike Dup (2319070-MSD1)					Source: E305050-01		Prepared: 05/15/23 Analyzed: 05/15/23		
Chloride	261	20.0	250	ND	104	80-120	0.382	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 9-1	
3122 National Parks Hwy	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	05/17/23 09:16

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

W0#
EE. 151093.01. AB

Page 1 of 1

Client: Ensolum, LLC.	Bill To Attention: Jim Raley Address: 5315 Buena Vista Dr City, State, Zip: Carlsbad NM, 88220 Phone: (575)689-7597 Email: jim.raley@dvn.com	Lab Use Only				TAT				EPA Program					
Project: RDX 9-1		Lab WO#	Job Number			1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo		E 305076	D10586-10057						x						
Address: 3122 National Parks Hwy		Analysis and Method											RCRA		
City, State, Zip: Carlsbad NM, 88220		TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM		TX				
Phone: 575-988-0055												State			
Email: agiovengo@ensolum.com											NM	CO	UT	AZ	TX
Report due by:											x				

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC NM		GDOC TX	Remarks
11:13	5/9/2023	Soil	1 Jar	PH03 - 2'	1							X			
11:20	5/9/2023	Soil	1 Jar	PH03 - 4'	2							X			
11:54	5/9/2023	Soil	1 Jar	PH09 - 2'	3							X			
12:00	5/9/2023	Soil	1 Jar	PH09 - 4'	4							X			
12:33	5/9/2023	Soil	1 Jar	PH10 - 2'	5							X			
12:47	5/9/2023	Soil	1 Jar	PH10 - 4'	6							X			

Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, jim.raley@dvn.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:

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>Lee Burton</i>	Date 5-10-23	Time 9:45	Received by: (Signature) <i>Michelle Gayle</i>	Date 5-10-23	Time 9:45	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>Michelle Gayle</i>	Date 5-10-23	Time 1630	Received by: (Signature) <i>Andrew Moss</i>	Date 5-11-23	Time 1700	
Relinquished by: (Signature) <i>Andrew Moss</i>	Date 5-11-23	Time 2300	Received by: (Signature) <i>Cathy Mars</i>	Date 5/12/23	Time 8:20	

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

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

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



envirotech

Envirotech Analytical Laboratory

Printed: 5/12/2023 10:52:43AM

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:	05/12/23 08:20	Work Order ID:	E305076
Phone:	(575) 988-0055	Date Logged In:	05/11/23 15:47	Logged In By:	Caitlin Mars
Email:	a.giovengo@ensolum.com	Due Date:	05/17/23 17:00 (3 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? No
 - Collectors name? No

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E306222

Job Number: 01058-0007

Received: 6/29/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/7/23

5796 U.S. Hwy 64
Farmington, NM 87401

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



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

Date Reported: 7/7/23

Ashley Giovengo
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E306222
Date Received: 6/29/2023 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/29/2023 8:00:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Field Offices:

Southern New Mexico Area
Lynn Jarboe
Technical Representative/Client Services
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Cell: 505-320-4759
ljjarboe@envirotech-inc.com

West Texas Midland/Odessa Area
Rayny Hagan
Technical Representative
Office: 505-421-LABS(5227)

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX 9-1 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 07/07/23 14:27
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS29 - 4'	E306222-01A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS30 - 4'	E306222-02A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS31 - 4'	E306222-03A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS32 - 4'	E306222-04A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS33 - 4'	E306222-05A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS34 - 4'	E306222-06A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS35 - 4'	E306222-07A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS36 - 4'	E306222-08A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS37 - 4'	E306222-09A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS38 - 4'	E306222-10A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS39 - 4'	E306222-11A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS40 - 4'	E306222-12A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS41 - 4'	E306222-13A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS42 - 4'	E306222-14A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS43 - 4'	E306222-15A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS44 - 4'	E306222-16A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS45 - 4'	E306222-17A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS46 - 4'	E306222-18A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.
FS47 - 4'	E306222-19A	Soil	06/27/23	06/29/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS29 - 4'

E306222-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
Surrogate: 4-Bromochlorobenzene-PID	94.3 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	86.6 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	96.1 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	105	20.0	1	06/29/23	06/30/23	



Sample Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported: 7/7/2023 2:27:08PM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

FS30 - 4'

E306222-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
Surrogate: 4-Bromochlorobenzene-PID	94.5 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	90.0 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	93.6 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	104	20.0	1	06/29/23	06/30/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS31 - 4'

E306222-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.5 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	90.3 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	86.1 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	873	20.0	1	06/29/23	06/30/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS32 - 4'

E306222-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.0 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.7 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	95.5 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	340	20.0	1	06/29/23	06/30/23	



Sample Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported: 7/7/2023 2:27:08PM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

FS33 - 4'

E306222-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
Surrogate: 4-Bromochlorobenzene-PID	95.5 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	87.2 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	99.7 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	408	20.0	1	06/29/23	06/30/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS34 - 4'

E306222-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.3 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.5 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	92.4 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	563	20.0	1	06/29/23	06/30/23	



Sample Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported: 7/7/2023 2:27:08PM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

FS35 - 4'

E306222-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
Surrogate: 4-Bromochlorobenzene-PID	95.2 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	87.0 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	90.7 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	318	20.0	1	06/29/23	07/01/23	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: RDX 9-1 Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 7/7/2023 2:27:08PM
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FS36 - 4'

E306222-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
Surrogate: 4-Bromochlorobenzene-PID	95.3 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.0 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	99.2 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	713	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS37 - 4'

E306222-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/29/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/29/23	
Toluene	ND	0.0250	1	06/29/23	06/29/23	
o-Xylene	ND	0.0250	1	06/29/23	06/29/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/29/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/29/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.3 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/29/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.1 %	70-130		06/29/23	06/29/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	95.8 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	1800	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS38 - 4'

E306222-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.6 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.2 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	97.5 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	1260	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS39 - 4'

E306222-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.0 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	89.3 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	95.2 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	227	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS40 - 4'

E306222-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.1 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.1 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	98.2 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	510	20.0	1	06/29/23	07/01/23	



Sample Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported: 7/7/2023 2:27:08PM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

FS41 - 4'

E306222-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
Surrogate: 4-Bromochlorobenzene-PID	94.3 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.0 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
Surrogate: n-Nonane	97.8 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	1990	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS42 - 4'

E306222-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.5 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	89.6 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	98.8 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	467	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS43 - 4'

E306222-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.5 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.0 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	103 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	6290	100	5	06/29/23	07/05/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS44 - 4'

E306222-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.5 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.4 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/06/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/06/23	
<i>Surrogate: n-Nonane</i>						
	102 %	50-200		07/05/23	07/06/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	629	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS45 - 4'

E306222-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	96.0 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL		Batch: 2326063	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	88.8 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2327013	
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/07/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/07/23	
<i>Surrogate: n-Nonane</i>	101 %	50-200		07/05/23	07/07/23	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: BA		Batch: 2326061	
Chloride	1020	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS46 - 4'

E306222-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.9 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	90.5 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/07/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/07/23	
<i>Surrogate: n-Nonane</i>						
	102 %	50-200		07/05/23	07/07/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	224	20.0	1	06/29/23	07/01/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/7/2023 2:27:08PM

FS47 - 4'

E306222-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Benzene	ND	0.0250	1	06/29/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/29/23	06/30/23	
Toluene	ND	0.0250	1	06/29/23	06/30/23	
o-Xylene	ND	0.0250	1	06/29/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/29/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/29/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.0 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326063
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/29/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.7 %	70-130		06/29/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2327013
Diesel Range Organics (C10-C28)	ND	25.0	1	07/05/23	07/07/23	
Oil Range Organics (C28-C36)	ND	50.0	1	07/05/23	07/07/23	
<i>Surrogate: n-Nonane</i>						
	97.5 %	50-200		07/05/23	07/07/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2326061
Chloride	128	20.0	1	06/29/23	07/01/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/7/2023 2:27:08PM

Volatile Organics by EPA 8021B

Analyst: SL

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

Blank (2326063-BLK1) Prepared: 06/29/23 Analyzed: 06/29/23

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	7.66		8.00		95.8	70-130			

LCS (2326063-BS1) Prepared: 06/29/23 Analyzed: 06/29/23

Benzene	4.29	0.0250	5.00		85.7	70-130			
Ethylbenzene	4.41	0.0250	5.00		88.1	70-130			
Toluene	4.40	0.0250	5.00		87.9	70-130			
o-Xylene	4.41	0.0250	5.00		88.2	70-130			
p,m-Xylene	8.99	0.0500	10.0		89.9	70-130			
Total Xylenes	13.4	0.0250	15.0		89.3	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.66		8.00		95.8	70-130			

Matrix Spike (2326063-MS1) Source: E306222-06 Prepared: 06/29/23 Analyzed: 06/29/23

Benzene	4.54	0.0250	5.00	ND	90.8	54-133			
Ethylbenzene	4.67	0.0250	5.00	ND	93.3	61-133			
Toluene	4.66	0.0250	5.00	ND	93.2	61-130			
o-Xylene	4.71	0.0250	5.00	ND	94.1	63-131			
p,m-Xylene	9.52	0.0500	10.0	ND	95.2	63-131			
Total Xylenes	14.2	0.0250	15.0	ND	94.9	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.61		8.00		95.1	70-130			

Matrix Spike Dup (2326063-MSD1) Source: E306222-06 Prepared: 06/29/23 Analyzed: 06/29/23

Benzene	4.66	0.0250	5.00	ND	93.2	54-133	2.59	20	
Ethylbenzene	4.80	0.0250	5.00	ND	96.1	61-133	2.92	20	
Toluene	4.79	0.0250	5.00	ND	95.7	61-130	2.69	20	
o-Xylene	4.81	0.0250	5.00	ND	96.2	63-131	2.23	20	
p,m-Xylene	9.77	0.0500	10.0	ND	97.7	63-131	2.58	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.2	63-131	2.46	20	
Surrogate: 4-Bromochlorobenzene-PID	7.47		8.00		93.3	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/7/2023 2:27:08PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326063-BLK1) Prepared: 06/29/23 Analyzed: 06/29/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.99		8.00		87.4	70-130			

LCS (2326063-BS2) Prepared: 06/29/23 Analyzed: 06/29/23

Gasoline Range Organics (C6-C10)	42.4	20.0	50.0		84.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.06		8.00		88.2	70-130			

Matrix Spike (2326063-MS2) Source: E306222-06 Prepared: 06/29/23 Analyzed: 06/29/23

Gasoline Range Organics (C6-C10)	41.2	20.0	50.0	ND	82.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.40		8.00		92.5	70-130			

Matrix Spike Dup (2326063-MSD2) Source: E306222-06 Prepared: 06/29/23 Analyzed: 06/29/23

Gasoline Range Organics (C6-C10)	41.1	20.0	50.0	ND	82.3	70-130	0.211	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.27		8.00		90.8	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/7/2023 2:27:08PM

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 (2327013-BLK1) Prepared: 07/05/23 Analyzed: 07/06/23

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	49.2		50.0		98.4	50-200			

LCS (2327013-BS1) Prepared: 07/05/23 Analyzed: 07/06/23

Diesel Range Organics (C10-C28)	251	25.0	250		100	38-132			
Surrogate: n-Nonane	49.8		50.0		99.7	50-200			

Matrix Spike (2327013-MS1) Source: E306222-09 Prepared: 07/05/23 Analyzed: 07/06/23

Diesel Range Organics (C10-C28)	257	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	48.7		50.0		97.4	50-200			

Matrix Spike Dup (2327013-MSD1) Source: E306222-09 Prepared: 07/05/23 Analyzed: 07/06/23

Diesel Range Organics (C10-C28)	254	25.0	250	ND	102	38-132	1.26	20	
Surrogate: n-Nonane	45.7		50.0		91.4	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/7/2023 2:27:08PM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2326061-BLK1)					Prepared: 06/29/23 Analyzed: 06/30/23				
Chloride	ND	20.0							
LCS (2326061-BS1)					Prepared: 06/29/23 Analyzed: 07/05/23				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2326061-MS1)					Source: E306222-01		Prepared: 06/29/23 Analyzed: 06/30/23		
Chloride	428	20.0	250	105	129	80-120			M2
Matrix Spike Dup (2326061-MSD1)					Source: E306222-01		Prepared: 06/29/23 Analyzed: 06/30/23		
Chloride	425	20.0	250	105	128	80-120	0.751	20	M2

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



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	07/07/23 14:27

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

Page 1 of 1

Client: WPX Project: RDX 9-1 Project Manager: Ashley Giovengo Address: 3122 National Parks Hwy City, State, Zip: Carlsbad, NM 88220 Phone: 575-988-0055 Email: agiovengo@ensolum.com Report due by:					Bill To Attention: Jim Raley Address: 5315 Buena Vista Dr City, State, Zip: Carlsbad, NM 88220 Phone: 575-689-7597 Email: jim.raley@dvn.com					Lab Use Only Lab WO# E306222 Job Number 01058-0007 Analysis and Method					TAT 1D 2D 3D Standard				EPA Program CWA SDWA	
														RCRA						
														State NM CO UT AZ TX						
														x						
														Remarks						
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC NM	GDOC TX							
1045	6/27/2023	S	1	FS29-4'	1							X								
1048	6/27/2023	S	1	FS30-4'	2							X								
1051	6/27/2023	S	1	FS31-4'	3							X								
1140	6/27/2023	S	1	FS32-4'	4							X								
1145	6/27/2023	S	1	FS33-4'	5							X								
1147	6/27/2023	S	1	FS34-4'	6							X								
1150	6/27/2023	S	1	FS35-4'	7							X								
1152	6/27/2023	S	1	FS36-4'	8							X								
1155	6/27/2023	S	1	FS37-4'	9							X								
1200	6/27/2023	S	1	FS38-4'	10							X								
Additional Instructions:																				
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.											Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.									
Relinquished by: (Signature) <i>[Signature]</i> Date <u>6/28/23</u> Time <u>1100</u>					Received by: (Signature) <i>[Signature]</i> Date <u>6-28-23</u> Time <u>1100</u>					Lab Use Only Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N										
Relinquished by: (Signature) <i>[Signature]</i> Date <u>6-28-23</u> Time <u>1700</u>					Received by: (Signature) <i>[Signature]</i> Date <u>6-28-23</u> Time <u>1730</u>					T1 T2 T3										
Relinquished by: (Signature) <i>[Signature]</i> Date <u>6-28-23</u> Time <u>2345</u>					Received by: (Signature) <i>[Signature]</i> Date <u>6/29/23</u> Time <u>8:00</u>					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.																				


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Project Information

Chain of Custody

Client: WPX		Bill To		Lab Use Only		TAT		EPA Program					
Project: RDX 9-1		Attention: Jim Raley		Lab WO# E306222		Job Number 01058-0007		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Ashley Giovengo		Address: 5315 Buena Vista Dr		City, State, Zip Carlsbad, NM 88220		Analysis and Method						RCRA	
Address: 3122 National Parks Hwy		City, State, Zip Carlsbad, NM 88220		Phone: 575-689-7597									
Phone: 575-988-0055		Email: jim.raley@dvn.com											
Email: agiovengo@ensolum.com													
Report due by:													

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BDOC NM	GDOC TX	State	Remarks
1205	6/27/2023	S	1	FS39-4'	11						X			
1208	6/27/2023	S	1	FS40-4'	12						X			
1210	6/27/2023	S	1	FS41-4'	13						X			
1215	6/27/2023	S	1	FS42-4'	14						X			
1218	6/27/2023	S	1	FS43-4'	15						X			
1219	6/27/2023	S	1	FS44-4'	16						X			
1223	6/27/2023	S	1	FS45-4'	17						X			
1227	6/27/2023	S	1	FS46-4'	18						X			
1230	6/27/2023	S	1	FS47-4'	19						X			

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Sampled by: <u>Roni Hayes</u>											
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only					
<u>[Signature]</u>	6/28/23	1100	<u>[Signature]</u>	6-28-23	1100	Received on ice: <u>Y</u> N					
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 T2 T3					
<u>[Signature]</u>	6-28-23	1700	<u>[Signature]</u>	6-28-23	1730						
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	AVG Temp °C					
<u>[Signature]</u>	6-28-23	2345	<u>[Signature]</u>	6/29/23	8:00	4					
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA					
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.											



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Envirotech Analytical Laboratory

Printed: 6/29/2023 12:59:05PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	06/29/23 08:00	Work Order ID:	E306222
Phone:	(539) 573-4018	Date Logged In:	06/29/23 09:32	Logged In By:	Caitlin Mars
Email:	ashley.giovengo@wesominc.com	Due Date:	07/07/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? No

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E306230

Job Number: 01058-0007

Received: 6/30/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

5796 U.S. Hwy 64
Farmington, NM 87401

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



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

Date Reported: 7/10/23

Ashley Giovengo
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E306230
Date Received: 6/30/2023 8:20:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/30/2023 8:20:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
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Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name:	RDX 9-1	Reported: 07/10/23 10:56
	Project Number:	01058-0007	
	Project Manager:	Ashley Giovengo	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS48 - 4'	E306230-01A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
FS49 - 4'	E306230-02A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
FS50 - 4'	E306230-03A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
FS51 - 4'	E306230-04A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
FS52 - 4'	E306230-05A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
FS53 - 4'	E306230-06A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS48 - 4'

E306230-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/30/23	06/30/23	
Toluene	ND	0.0250	1	06/30/23	06/30/23	
o-Xylene	ND	0.0250	1	06/30/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/30/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/30/23	06/30/23	
Surrogate: 4-Bromochlorobenzene-PID	96.0 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	06/30/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.2 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	06/30/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	06/30/23	
Surrogate: n-Nonane	103 %	50-200		06/30/23	06/30/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	364	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS49 - 4'

E306230-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/30/23	06/30/23	
Toluene	ND	0.0250	1	06/30/23	06/30/23	
o-Xylene	ND	0.0250	1	06/30/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/30/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/30/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.3 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.1 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	06/30/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	06/30/23	
<i>Surrogate: n-Nonane</i>						
	105 %	50-200		06/30/23	06/30/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	176	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS50 - 4'

E306230-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	06/30/23	
Ethylbenzene	ND	0.0250	1	06/30/23	06/30/23	
Toluene	ND	0.0250	1	06/30/23	06/30/23	
o-Xylene	ND	0.0250	1	06/30/23	06/30/23	
p,m-Xylene	ND	0.0500	1	06/30/23	06/30/23	
Total Xylenes	ND	0.0250	1	06/30/23	06/30/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.7 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	06/30/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.7 %	70-130		06/30/23	06/30/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	06/30/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	06/30/23	
<i>Surrogate: n-Nonane</i>						
	106 %	50-200		06/30/23	06/30/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	329	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS51 - 4'

E306230-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	07/01/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/01/23	
Toluene	ND	0.0250	1	06/30/23	07/01/23	
o-Xylene	ND	0.0250	1	06/30/23	07/01/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/01/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/01/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.5 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/01/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.7 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	117 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	581	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS52 - 4'

E306230-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	07/01/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/01/23	
Toluene	ND	0.0250	1	06/30/23	07/01/23	
o-Xylene	ND	0.0250	1	06/30/23	07/01/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/01/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/01/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.3 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/01/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.2 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	104 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	1070	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:56:57AM

FS53 - 4'

E306230-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	07/01/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/01/23	
Toluene	ND	0.0250	1	06/30/23	07/01/23	
o-Xylene	ND	0.0250	1	06/30/23	07/01/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/01/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/01/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.5 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/01/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.9 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	105 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	1120	20.0	1	07/05/23	07/06/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:56:57AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326079-BLK1)

Prepared: 06/30/23 Analyzed: 06/30/23

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	7.47		8.00		93.4	70-130			

LCS (2326079-BS1)

Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	4.90	0.0250	5.00		98.1	70-130			
Ethylbenzene	4.78	0.0250	5.00		95.7	70-130			
Toluene	4.86	0.0250	5.00		97.3	70-130			
o-Xylene	4.80	0.0250	5.00		96.1	70-130			
p,m-Xylene	9.74	0.0500	10.0		97.3	70-130			
Total Xylenes	14.5	0.0250	15.0		96.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.66		8.00		95.7	70-130			

Matrix Spike (2326079-MS1)

Source: E306230-03

Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	4.97	0.0250	5.00	ND	99.5	54-133			
Ethylbenzene	4.85	0.0250	5.00	ND	96.9	61-133			
Toluene	4.94	0.0250	5.00	ND	98.7	61-130			
o-Xylene	4.86	0.0250	5.00	ND	97.3	63-131			
p,m-Xylene	9.84	0.0500	10.0	ND	98.4	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.0	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.65		8.00		95.7	70-130			

Matrix Spike Dup (2326079-MSD1)

Source: E306230-03

Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	5.06	0.0250	5.00	ND	101	54-133	1.66	20	
Ethylbenzene	4.92	0.0250	5.00	ND	98.4	61-133	1.52	20	
Toluene	5.01	0.0250	5.00	ND	100	61-130	1.53	20	
o-Xylene	4.94	0.0250	5.00	ND	98.7	63-131	1.48	20	
p,m-Xylene	10.0	0.0500	10.0	ND	100	63-131	1.61	20	
Total Xylenes	14.9	0.0250	15.0	ND	99.6	63-131	1.57	20	
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.0	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:56:57AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326079-BLK1) Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.36		8.00		91.9	70-130			

LCS (2326079-BS2) Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	45.7	20.0	50.0		91.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.30		8.00		91.2	70-130			

Matrix Spike (2326079-MS2) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	42.6	20.0	50.0	ND	85.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.06		8.00		88.2	70-130			

Matrix Spike Dup (2326079-MSD2) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	42.9	20.0	50.0	ND	85.7	70-130	0.521	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.13		8.00		89.1	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:56:57AM

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 (2326083-BLK1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.8		50.0		106	50-200			

LCS (2326083-BS1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	277	25.0	250		111	38-132			
Surrogate: n-Nonane	51.5		50.0		103	50-200			

Matrix Spike (2326083-MS1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	11400	2500	250	10100	520	38-132			M4
Surrogate: n-Nonane	70.3		50.0		141	50-200			

Matrix Spike Dup (2326083-MSD1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	10500	2500	250	10100	153	38-132	8.40	20	M4
Surrogate: n-Nonane	69.8		50.0		140	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:56:57AM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2327017-BLK1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	ND	20.0							
LCS (2327017-BS1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2327017-MS1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	604	20.0	250	364	95.8	80-120			
Matrix Spike Dup (2327017-MSD1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	614	20.0	250	364	100	80-120	1.73	20	

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



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	07/10/23 10:56

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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: 6/30/2023 10:25:39AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	06/30/23 08:20	Work Order ID:	E306230
Phone:	(539) 573-4018	Date Logged In:	06/29/23 16:53	Logged In By:	Caitlin Mars
Email:	ashley.giovengo@wesominc.com	Due Date:	07/10/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

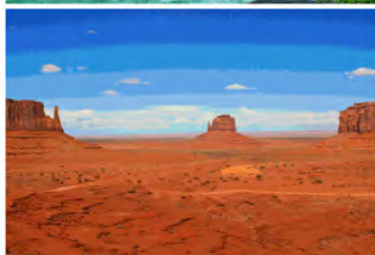
Date



envirotech Inc.

Report to:

Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E306231

Job Number: 01058-0007

Received: 6/30/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

5796 U.S. Hwy 64
Farmington, NM 87401

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



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

Date Reported: 7/10/23

Ashley Giovengo
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E306231
Date Received: 6/30/2023 8:20:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/30/2023 8:20:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
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Sample Summary

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported: 07/10/23 10:58
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW03 - 0 - 4'	E306231-01A	Soil	06/27/23	06/30/23	Glass Jar, 2 oz.
SW06 - 0 - 4'	E306231-02A	Soil	06/27/23	06/30/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:58:30AM

SW03 - 0 - 4'

E306231-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	07/01/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/01/23	
Toluene	ND	0.0250	1	06/30/23	07/01/23	
o-Xylene	ND	0.0250	1	06/30/23	07/01/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/01/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/01/23	
Surrogate: 4-Bromochlorobenzene-PID	95.0 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/01/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.1 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
Surrogate: n-Nonane	100 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	38.8	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 10:58:30AM

SW06 - 0 - 4'

E306231-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Benzene	ND	0.0250	1	06/30/23	07/01/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/01/23	
Toluene	ND	0.0250	1	06/30/23	07/01/23	
o-Xylene	ND	0.0250	1	06/30/23	07/01/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/01/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/01/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.1 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326079
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/01/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.1 %	70-130		06/30/23	07/01/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	108 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	586	20.0	1	07/05/23	07/06/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:58:30AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326079-BLK1) Prepared: 06/30/23 Analyzed: 06/30/23

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	7.47		8.00		93.4	70-130			

LCS (2326079-BS1) Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	4.90	0.0250	5.00		98.1	70-130			
Ethylbenzene	4.78	0.0250	5.00		95.7	70-130			
Toluene	4.86	0.0250	5.00		97.3	70-130			
o-Xylene	4.80	0.0250	5.00		96.1	70-130			
p,m-Xylene	9.74	0.0500	10.0		97.3	70-130			
Total Xylenes	14.5	0.0250	15.0		96.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.66		8.00		95.7	70-130			

Matrix Spike (2326079-MS1) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	4.97	0.0250	5.00	ND	99.5	54-133			
Ethylbenzene	4.85	0.0250	5.00	ND	96.9	61-133			
Toluene	4.94	0.0250	5.00	ND	98.7	61-130			
o-Xylene	4.86	0.0250	5.00	ND	97.3	63-131			
p,m-Xylene	9.84	0.0500	10.0	ND	98.4	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.0	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.65		8.00		95.7	70-130			

Matrix Spike Dup (2326079-MSD1) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Benzene	5.06	0.0250	5.00	ND	101	54-133	1.66	20	
Ethylbenzene	4.92	0.0250	5.00	ND	98.4	61-133	1.52	20	
Toluene	5.01	0.0250	5.00	ND	100	61-130	1.53	20	
o-Xylene	4.94	0.0250	5.00	ND	98.7	63-131	1.48	20	
p,m-Xylene	10.0	0.0500	10.0	ND	100	63-131	1.61	20	
Total Xylenes	14.9	0.0250	15.0	ND	99.6	63-131	1.57	20	
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.0	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:58:30AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326079-BLK1) Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.36		8.00		91.9	70-130			

LCS (2326079-BS2) Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	45.7	20.0	50.0		91.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.30		8.00		91.2	70-130			

Matrix Spike (2326079-MS2) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	42.6	20.0	50.0	ND	85.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.06		8.00		88.2	70-130			

Matrix Spike Dup (2326079-MSD2) Source: E306230-03 Prepared: 06/30/23 Analyzed: 06/30/23

Gasoline Range Organics (C6-C10)	42.9	20.0	50.0	ND	85.7	70-130	0.521	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.13		8.00		89.1	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:58:30AM

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 (2326083-BLK1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.8		50.0		106	50-200			

LCS (2326083-BS1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	277	25.0	250		111	38-132			
Surrogate: n-Nonane	51.5		50.0		103	50-200			

Matrix Spike (2326083-MS1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	11400	2500	250	10100	520	38-132			M4
Surrogate: n-Nonane	70.3		50.0		141	50-200			

Matrix Spike Dup (2326083-MSD1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	10500	2500	250	10100	153	38-132	8.40	20	M4
Surrogate: n-Nonane	69.8		50.0		140	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 10:58:30AM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2327017-BLK1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	ND	20.0							
LCS (2327017-BS1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2327017-MS1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	604	20.0	250	364	95.8	80-120			
Matrix Spike Dup (2327017-MSD1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	614	20.0	250	364	100	80-120	1.73	20	

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



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	07/10/23 10:58

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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





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Envirotech Analytical Laboratory

Printed: 6/30/2023 10:24:28AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	06/30/23 08:20	Work Order ID:	E306231
Phone:	(539) 573-4018	Date Logged In:	06/29/23 16:58	Logged In By:	Caitlin Mars
Email:	ashley.giovengo@wesominc.com	Due Date:	07/10/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date



envirotech Inc.

Report to:
Ashley Giovengo



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

WPX Energy - Carlsbad

Project Name: RDX 9-1

Work Order: E306232

Job Number: 01058-0007

Received: 6/30/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/10/23

5796 U.S. Hwy 64
Farmington, NM 87401

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



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

Date Reported: 7/10/23

Ashley Giovengo
5315 Buena Vista Dr
Carlsbad, NM 88220



Project Name: RDX 9-1
Workorder: E306232
Date Received: 6/30/2023 8:20:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/30/2023 8:20:00AM, under the Project Name: RDX 9-1.

The analytical test results summarized in this report with the Project Name: RDX 9-1 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

Walter Hinchman
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Sample Summary

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	07/10/23 11:00

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 - 0 - 4'	E306232-01A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
SW02 - 0 - 4'	E306232-02A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
SW04 - 0 - 4'	E306232-03A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.
SW05 - 0 - 4'	E306232-04A	Soil	06/28/23	06/30/23	Glass Jar, 2 oz.



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 11:00:28AM

SW01 - 0 - 4'

E306232-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: SL		Batch: 2326082	
Benzene	ND	0.0250	1	06/30/23	07/06/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/06/23	
Toluene	ND	0.0250	1	06/30/23	07/06/23	
o-Xylene	ND	0.0250	1	06/30/23	07/06/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/06/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/06/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.7 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: SL		Batch: 2326082	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/06/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.0 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KM		Batch: 2326083	
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	109 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: BA		Batch: 2327017	
Chloride	349	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 11:00:28AM

SW02 - 0 - 4'

E306232-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Benzene	ND	0.0250	1	06/30/23	07/06/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/06/23	
Toluene	ND	0.0250	1	06/30/23	07/06/23	
o-Xylene	ND	0.0250	1	06/30/23	07/06/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/06/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/06/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.8 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/06/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.1 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	106 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	274	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 11:00:28AM

SW04 - 0 - 4'

E306232-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Benzene	ND	0.0250	1	06/30/23	07/06/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/06/23	
Toluene	ND	0.0250	1	06/30/23	07/06/23	
o-Xylene	ND	0.0250	1	06/30/23	07/06/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/06/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/06/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.7 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/06/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	90.5 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	110 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	37.1	20.0	1	07/05/23	07/06/23	



Sample Data

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

Project Name: RDX 9-1
Project Number: 01058-0007
Project Manager: Ashley Giovengo

Reported:
7/10/2023 11:00:28AM

SW05 - 0 - 4'

E306232-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Benzene	ND	0.0250	1	06/30/23	07/06/23	
Ethylbenzene	ND	0.0250	1	06/30/23	07/06/23	
Toluene	ND	0.0250	1	06/30/23	07/06/23	
o-Xylene	ND	0.0250	1	06/30/23	07/06/23	
p,m-Xylene	ND	0.0500	1	06/30/23	07/06/23	
Total Xylenes	ND	0.0250	1	06/30/23	07/06/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.3 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: SL		Batch: 2326082
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/30/23	07/06/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	87.3 %	70-130		06/30/23	07/06/23	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2326083
Diesel Range Organics (C10-C28)	ND	25.0	1	06/30/23	07/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	06/30/23	07/01/23	
<i>Surrogate: n-Nonane</i>						
	112 %	50-200		06/30/23	07/01/23	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: BA		Batch: 2327017
Chloride	59.5	20.0	1	07/05/23	07/06/23	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 11:00:28AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326082-BLK1)

Prepared: 06/30/23 Analyzed: 07/06/23

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	7.61		8.00		95.1	70-130			

LCS (2326082-BS1)

Prepared: 06/30/23 Analyzed: 07/06/23

Benzene	4.94	0.0250	5.00		98.7	70-130			
Ethylbenzene	4.83	0.0250	5.00		96.5	70-130			
Toluene	4.92	0.0250	5.00		98.4	70-130			
o-Xylene	4.86	0.0250	5.00		97.3	70-130			
p,m-Xylene	9.80	0.0500	10.0		98.0	70-130			
Total Xylenes	14.7	0.0250	15.0		97.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.62		8.00		95.3	70-130			

Matrix Spike (2326082-MS1)

Source: E306232-04

Prepared: 06/30/23 Analyzed: 07/06/23

Benzene	4.92	0.0250	5.00	ND	98.4	54-133			
Ethylbenzene	4.81	0.0250	5.00	ND	96.2	61-133			
Toluene	4.92	0.0250	5.00	ND	98.3	61-130			
o-Xylene	4.84	0.0250	5.00	ND	96.9	63-131			
p,m-Xylene	9.79	0.0500	10.0	ND	97.9	63-131			
Total Xylenes	14.6	0.0250	15.0	ND	97.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.70		8.00		96.2	70-130			

Matrix Spike Dup (2326082-MSD1)

Source: E306232-04

Prepared: 06/30/23 Analyzed: 07/06/23

Benzene	5.18	0.0250	5.00	ND	104	54-133	5.15	20	
Ethylbenzene	5.10	0.0250	5.00	ND	102	61-133	5.95	20	
Toluene	5.18	0.0250	5.00	ND	104	61-130	5.32	20	
o-Xylene	5.11	0.0250	5.00	ND	102	63-131	5.37	20	
p,m-Xylene	10.4	0.0500	10.0	ND	104	63-131	5.89	20	
Total Xylenes	15.5	0.0250	15.0	ND	103	63-131	5.71	20	
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.0	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 11:00:28AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2326082-BLK1) Prepared: 06/30/23 Analyzed: 07/06/23

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

LCS (2326082-BS2) Prepared: 06/30/23 Analyzed: 07/06/23

Gasoline Range Organics (C6-C10)	44.3	20.0	50.0		88.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.35		8.00		91.8	70-130			

Matrix Spike (2326082-MS2) Source: E306232-04 Prepared: 06/30/23 Analyzed: 07/06/23

Gasoline Range Organics (C6-C10)	45.6	20.0	50.0	ND	91.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.21		8.00		90.1	70-130			

Matrix Spike Dup (2326082-MSD2) Source: E306232-04 Prepared: 06/30/23 Analyzed: 07/06/23

Gasoline Range Organics (C6-C10)	47.2	20.0	50.0	ND	94.4	70-130	3.40	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.31		8.00		91.4	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 11:00:28AM

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 (2326083-BLK1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.8		50.0		106	50-200			

LCS (2326083-BS1)					Prepared: 06/30/23 Analyzed: 06/30/23				
Diesel Range Organics (C10-C28)	277	25.0	250		111	38-132			
Surrogate: n-Nonane	51.5		50.0		103	50-200			

Matrix Spike (2326083-MS1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	11400	2500	250	10100	520	38-132			M4
Surrogate: n-Nonane	70.3		50.0		141	50-200			

Matrix Spike Dup (2326083-MSD1)					Source: E306227-01		Prepared: 06/30/23 Analyzed: 06/30/23		
Diesel Range Organics (C10-C28)	10500	2500	250	10100	153	38-132	8.40	20	M4
Surrogate: n-Nonane	69.8		50.0		140	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	RDX 9-1	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	7/10/2023 11:00:28AM

Anions by EPA 300.0/9056A

Analyst: BA

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

Blank (2327017-BLK1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	ND	20.0							
LCS (2327017-BS1)					Prepared: 07/05/23 Analyzed: 07/06/23				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2327017-MS1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	604	20.0	250	364	95.8	80-120			
Matrix Spike Dup (2327017-MSD1)					Source: E306230-01		Prepared: 07/05/23 Analyzed: 07/06/23		
Chloride	614	20.0	250	364	100	80-120	1.73	20	

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



Definitions and Notes

WPX Energy - Carlsbad	Project Name:	RDX 9-1	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Ashley Giovengo	07/10/23 11:00

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

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

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



Project Information

Chain of Custody

Page 1 of 1

[illegible]

Additional Instructions:

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

Sampled by:

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>Michelle Campese</i>	Date 6/29/23	Time 1500	Received by: (Signature) <i>Michelle Campese</i>	Date 6-29-23	Time 1500	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>Michelle Campese</i>	Date 6-29-23	Time 1700	Received by: (Signature) <i>Michelle Campese</i>	Date 6-29-23	Time 1730	
Relinquished by: (Signature) <i>Andrew Russo</i>	Date 6-29-23	Time 2300	Received by: (Signature) <i>Andrew Russo</i>	Date 6/30/23	Time 8:20	

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: 6/30/2023 10:23:02AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	WPX Energy - Carlsbad	Date Received:	06/30/23 08:20	Work Order ID:	E306232
Phone:	(539) 573-4018	Date Logged In:	06/29/23 17:00	Logged In By:	Caitlin Mars
Email:	ashley.giovengo@wesominc.com	Due Date:	07/10/23 17:00 (4 day TAT)		

Chain of Custody (COC)

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

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

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date



envirotech Inc.



APPENDIX F

Email Correspondence

Erick Herrera

From: Erick Herrera
Sent: Wednesday, October 26, 2022 3:01 PM
To: OCD.Enviro@emnrd.nm.gov; 'CFO_Spill, BLM_NM'
Cc: Raley, Jim
Subject: WPX Site Sampling Activity Update (10/31 - 11/4)

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between October 31 – November 4, 2022:

Site Name: RDX 9-1
API: 30-015-36211
Incident Number: nAB1728635377

Site Name: RDX 17-2
API: 30-015-36464
Incident Number: nAB1633449255

Site Name: LVP SWD #001
API: 30-015-42234
Incident Number: nAPP2135033453

Site Name: RDX Federal 21-44
API: 30-015-41193
Incident Number: nAPP2115533694

Site Name: RDU 54
API: 30-015-41975
Incident Number: nAB1722953239

Site Name: Electrolux 21 State Com #001
API: 30-025-35769
Incident Number: nTO1424150643

Site Name: EP USA 3
API: 30-015-24249
Incident Number: nAB1622531873

Thank you,



Erick Hererra
Staff Geologist
281-777-4152
Ensolum, LLC
in f t

PLEASE NOTE OUR NEW CORPORATE ADDRESS:

Ensolum, LLC

8330 LBJ Freeway, Ste. B830

Dallas, TX 75243

Erick Herrera

From: Erick Herrera
Sent: Friday, November 4, 2022 2:41 PM
To: OCD.Enviro@emnrd.nm.gov; 'CFO_Spill, BLM_NM'
Cc: Devon-Team; Raley, Jim
Subject: WPX Site Sampling Activity Update (11/7 - 11/11)

Good afternoon,

WPX has added an additional site for anticipated confirmation sampling toward the end of next week.

Site Name: RDX 9-1
API: 30-015-36211
Incident Numbers: nAB1728635377

Thanks,



Erick Herrera

Staff Geologist
281-777-4152

Ensolum, LLC



PLEASE NOTE OUR NEW CORPORATE ADDRESS:

Ensolum, LLC
8330 LBJ Freeway, Ste. B830
Dallas, TX 75243

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, March 16, 2023 10:21 AM
To: Erick Herrera
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (3/20 - 3/24/2023)

[**EXTERNAL EMAIL**]

Erick,

Thank you for the notification. The notification requirement is two full business days which would require notification at the latest at the end of the workday on Wednesday for Monday morning sampling. Also please indicate specific times, dates and locations for each sampling event. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



From: Erick Herrera <eherrera@ensolum.com>
Sent: Thursday, March 16, 2023 8:41 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; 'CFO_Spill, BLM_NM' <blm_nm_cfo_spill@blm.gov>
Cc: Raley, Jim <jim.ralej@dmn.com>; Devon Team <Devon-Team@ensolum.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Update (3/20 - 3/24/2023)

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

Good morning,

WPX anticipates conducting confirmation soil sampling activities at the following sites between March 20 – March 24, 2023:

Site Name: Pecos Federal #001Y
API: 30-015-24875
Incident Number: nAPP2208846424

Site Name: RDX 9-1

API: 30-015-36211

Incident Number: nAB1728635377

Site Name: Federal G Gas Com #001

API: 30-015-20848

Incident Number: nAB1428733041

Thank you,



Erick Herrera

Staff Geologist

281-777-4152

Ensolum, LLC



From: [Ashley Giovengo](#)
To: [Ronni Hayes](#)
Subject: FW: [EXTERNAL] RE: 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)
Date: Monday, July 3, 2023 11:19:37 AM
Attachments: [image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

**Ashley Giovengo**

Senior Engineer

575-988-0055

Ensolum, LLC

in f

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Wednesday, June 28, 2023 3:02 PM
To: Ashley Giovengo <agiovengo@ensolum.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: RE: [EXTERNAL] RE: 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)

[**EXTERNAL EMAIL**]

Ashley,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

JH

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
<http://www.emnrd.nm.gov>



From: Ashley Giovengo <agiovengo@ensolum.com>

Sent: Wednesday, June 28, 2023 7:09 AM

To: Cole Burton <cburton@ensolum.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Cc: Cason Dillon <cdillon@ensolum.com>; Raley, Jim <Jim.Raley@dvn.com>

Subject: [EXTERNAL] RE: 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)

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

Hello,

Please extend this confirmation sampling notification to include samples collected on 06/28/2023 and 06/29/2023.

Please let us know if you plan to be onsite to oversee this sampling event.

Thanks,



Ashley Giovengo

Senior Engineer

575-988-0055

Ensolum, LLC

in f 

From: Cole Burton <cburton@ensolum.com>

Sent: Friday, June 23, 2023 10:34 AM

To: Enviro, OCD, EMNRD <ocd.enviro@emnrd.nm.gov>

Cc: Ashley Giovengo <agiovengo@ensolum.com>; Cason Dillon <cdillon@ensolum.com>; Raley, Jim <Jim.Raley@dvn.com>

Subject: 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)

Hello,

We intend collect confirmation samples at RDX 9-1 site (NAB1728635377) on Tuesday, June 27, 2023.

Please let us know if you plan to be onsite to oversee this sampling event.

Thanks,



Cole Burton

Project Manager

575-706-5056

Ensolum, LLC

in f 

From: [Enviro, OCD, EMNRD](#)
To: [Cole Burton](#)
Cc: [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)
Subject: RE: [EXTERNAL] 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)
Date: Friday, June 23, 2023 2:53:25 PM
Attachments: [image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Cole,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

JH

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



From: Cole Burton <cburton@ensolum.com>
Sent: Friday, June 23, 2023 10:34 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Ashley Giovengo <agiovengo@ensolum.com>; Cason Dillon <cdillon@ensolum.com>; Raley, Jim <Jim.Raley@dvn.com>
Subject: [EXTERNAL] 48-Hour Confirmation Sampling Notice - RDX 9-1 (NAB1728635377)

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

Hello,

We intend collect confirmation samples at RDX 9-1 site (NAB1728635377) on Tuesday, June 27, 2023.

Please let us know if you plan to be onsite to oversee this sampling event.

Thanks,



Cole Burton
Project Manager
575-706-5056
Ensolum, LLC
in f 

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 246901

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 246901
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAB1728635377 RDX 9 #001, thank you. This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation including pictures of the contoured backfilled excavation surface and a thorough discussion on reseeding mixture, vegetation ratio, timelines, etc..., will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	1/16/2024