Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID:	nAPP2215732821
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 11/22/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/28/2022

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: Robert Hamlet Date: 2/21/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	nAPP2215732821
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party WPX Energy Permian, LLC	OGRID 246289
Contact Name Jim Raley	Contact Telephone 575-689-7597
Contact email jim.raley@dvn.com	Incident # *(assigned by OCD)* nAPP2215732821
Contact mailing address 5315 Buena Vista Drive, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.0197411 Longitude -103.8926239
(NAD 83 in decimal degrees to 5 decimal places)

Site Name RDX FEDERAL 28 #011	Site Type Oil
Date Release Discovered	API# *(if applicable)* 30-015-42109

Unit Letter	Section	Township	Range	County
D	28	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 12	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 12	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Human Error, valve left slightly open on wellhead. Allowing for the release of approx.. 12bbls oil and 12 bbls produced water to pad surface. No fluids recovered.

Release Volume (bbls) = (Release area (sqft) * saturation depth (ft))/27 cubic yards * Soil Porosity * 6.41187 bbls of fluid

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2215732821
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: __Jim Raley_____ Title: __Environmental Professional_____

Signature: _____ Date: __6/6/2022_____

email: ____jim.raley@dvn.com_____ Telephone: ___575-689-7597_____

OCD Only

Received by: Jocelyn Harimon Date: 06/03/2022

State of New Mexico
Oil Conservation Division

Incident ID:	nAPP2215732821
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID:	nAPP2215732821
District RP	
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Signature: Jim Raley Date: 11/22/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/28/2022

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Closure

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☒ Description of remediation activities

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Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 11/22/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/28/2022

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: _____

ENSOLUM

CLOSURE REQUEST REPORT

Site Location:

RDX Federal 28 #011
Eddy County, New Mexico
Incident Number nAPP2215732821

November 21, 2022
Ensolum Project No. 03A1987032

Prepared for:

WPX Energy Permian, LLC
5315 Buena Vista Drive
Carlsbad, New Mexico 88220
Attention: Jim Raley

Prepared by:

Joseph S. Hernandez
Senior Geologist

Ashley L. Ager, M.S., P.G.
Principal

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared this Closure Request Report (CRR) to document site assessment, soil sampling activities, and corrective actions performed by WPX Energy Permian, LLC (WPX) at the RDX Federal 28 #011 (Site) in Unit D, Section 28, Township 26 South, Range 30 East, in Eddy County, New Mexico (**Figure 1** in **Appendix A**). Based on remedial activities performed at the Site and laboratory analytical results from delineation and confirmation soil sampling activities indicating compliance with the regulatory standards, WPX respectfully submits this CRR, which summarizes remediation and soil sampling activities associated with a reportable release of produced water and crude oil at the Site.

1.1 Site Description & Background

The Site is located within Eddy County, New Mexico (32.0197411 N, -103.8926239° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM) (**Figure 1** in **Appendix A**).

On May 26, 2022, a valve on a wellhead was left slightly opened, resulting in approximately 12 barrels (bbls) of oil and 12 bbls of produced water to be released to the well pad and adjacent pasture. No fluids were recovered following the release. Initial response efforts included scraping of surface soils within the subject release. The release extent is presented on **Figure 2** in **Appendix A**. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) with a subsequent Release Notification Form C-141 (Form C-141) on June 6, 2022. The release was assigned Incident Number nAPP2215732821. Prior to initiating any ground disturbance in the pasture area, WPX submitted a Sundry Request Form for pasture areas impacted by a release. An archeological site boundary during the desktop review was identified near the release location and BLM required a cultural resource specialist to be onsite to monitor remediation activities. Due to additional coordination initiated by BLM, WPX submitted an extension request to November 22, 2022, which was subsequently approved on August 10, 2022.

1.2 Site Characterization

The Site has been characterized to determine 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 New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on **Figure 1 in Appendix A.**

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based a soil boring (MW-1) that was drilled by Talon LPE for WPX on December 9, 2020, located approximately ½ mile northeast of the Site at the RDX Federal Com 21-43 well pad (RDX 21-43). Using a truck-mounted drill rig equipped with hollow stem auger, the soil boring was advanced to a total depth of 110 feet bgs. No fluids were observed within the soil boring after at least 72 hours. Following the observation period, the boring was plugged and abandoned. The well log is provided in **Appendix B**. The location of the soil boring is depicted on **Figure 1** in **Appendix A**.

The closest continuously flowing or significant watercourse is an intermittent dry wash, located approximately 1,180 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet in the pasture area that was impacted by the release.

2.0 REMEDIATION AND SOIL SAMPLING ACTIVITIES

Between September 8 and September 13, 2022, Ensolum personnel oversaw excavation activities to remove impacted soil from the pasture area and delineation activities to confirm the presence or absence of impacted soil within and around the release extent on the well pad. Excavation and delineation activites were directed by field sceening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Following removal of impacted soil, Ensolum collected 5-point composite soil samples at a sampling frequency of 200 square feet from the sidewalls and 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. Composite soil samples SW01, SW04, and SW09 through SW11 were collected from the sidewalls of the excavation at depths ranging from the ground surface to approximately 4 feet bgs; SW02, SW03, and SW05 were collected from the sidewalls of the excavation at depths ranging from the ground surface to approximately 3 feet bgs; SW06 through SW08 were collected from the sidewalls of the excavation at depths ranging from the ground surface to approximately 2 feet bgs. Composite soil samples FS01 through FS24 were collected from the floor of the excavation at depths ranging from the 2 feet bgs to approximately 4 feet bgs. The approximate extent of the excavation and confirmation soil sample locations are provided on **Figure 3** in **Appendix A**. The soil samples were placed directly into a 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 at or below 4 degrees Celsius (°C), 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.

On September 12 and September 13, 2022, delineation activities were conducted concurrently with excavation activities. Delineation soil samples (samples designated BH) were collected in boreholes advanced by use of heavy equipment. A total of two soil samples were collected from each delineation soil sample location (BH01 through BH12): the sample with the highest observed field screening (0.5-foot bgs) and the total depth (1-foot bgs). The soil samples were handled, collected, and analyzed as previously described. The location of the delineation soil samples are shown in **Figure 2** in **Appendix A**. Field screening results and observations for each delineation soil sample were recorded on lithologic/soil sampling logs (**Appendix C**). Photographic documentation of remediation activities is included in **Appendix D**.

3.0 SOIL SAMPLING RESULTS

Laboratory analytical results for excavation soil samples FS01 through FS24 and SW01 through SW11 indicated all constituents of concern (COCs) were below the applicable Closure Criteria and/or reclamation standard of the subject release.

Laboratory analytical results for delineation soil samples BH05 through BH10, collected on the well pad and within the subject release, indicated all COCs were below the applicable Closure Criteria. Laboratory analytical results for delineation soil samples BH01 through BH04, BH11, and BH12 provide lateral definition of the subject release.

Laboratory analytical results are summarized in the **Table 1** included in **Appendix E**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix F**. **Appendix G** provides email confirmation sampling and extension request notification receipts associated with the subject release.

4.0 CLOSURE REQUEST

Based on the results documented in this report, the following findings and conclusions regarding the releases are presented:

- Laboratory analytical results for excavation soil samples FS01 through FS24 and SW01 through SW11 indicated all COCs were below the applicable Closure Criteria and/or reclamation standard of the subject release. Laboratory analytical results for delineation soil samples BH06 through BH10, collected within the subject release on the well pad, indicated all COCs were below the applicable Closure Criteria of the subject release. Laboratory analytical results for delineation soil samples BH01 through BH04, BH11, and BH12 provide lateral definition of the subject release; and

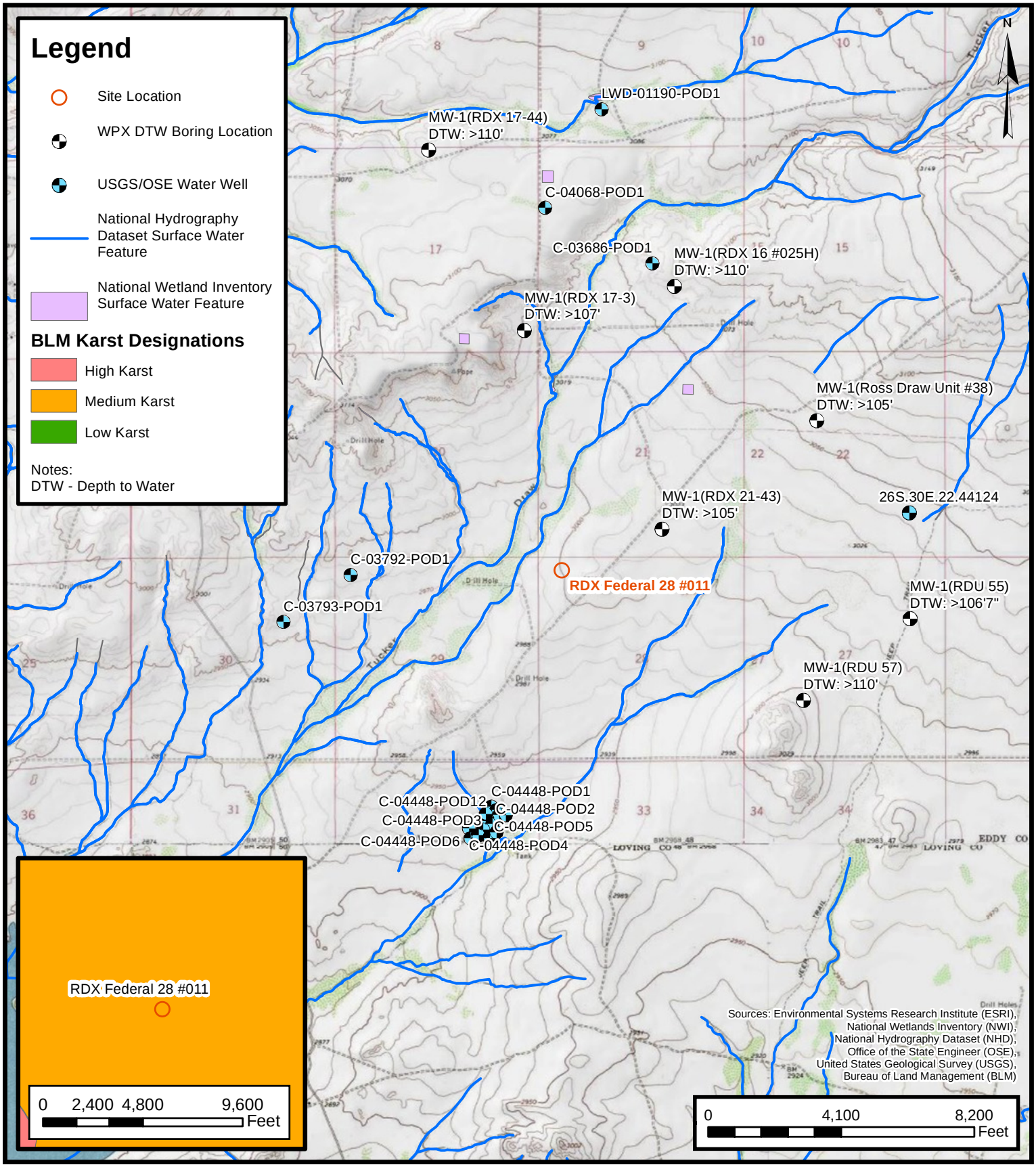
- Approximately 550 yards of impacted soil were excavated from the subject release area during excavation activities and disposed of in accordance with state and federal regulations. The excavation was backfilled with clean, imported soil and restored to “as close to its original state” as possible.

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 nAPP2215732821.

ENSOLUM

APPENDIX A

Figures



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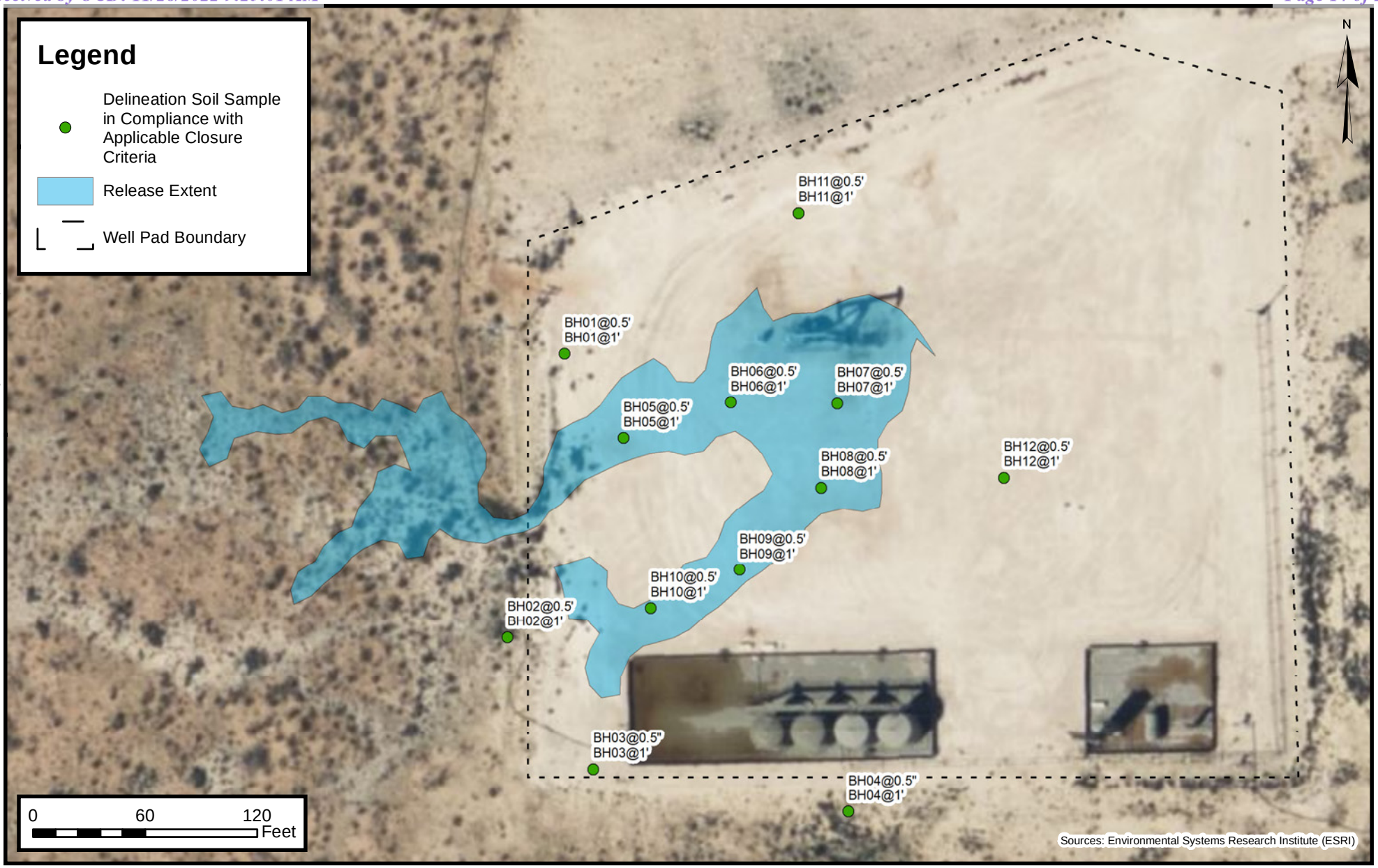
Environmental, Engineering and Hydrogeologic Consultants

Site Map

RDX Federal 28 #011
WPX Energy Permian, LLC
Unit D Sec 22 T26S R30E
Eddy County, New Mexico

FIGURE

1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\WPX Permian Basin\03A1987032 - RDX Federal 28 #111 - MXDs\Figure 2 Delineation Soil Sample Locations.mxd

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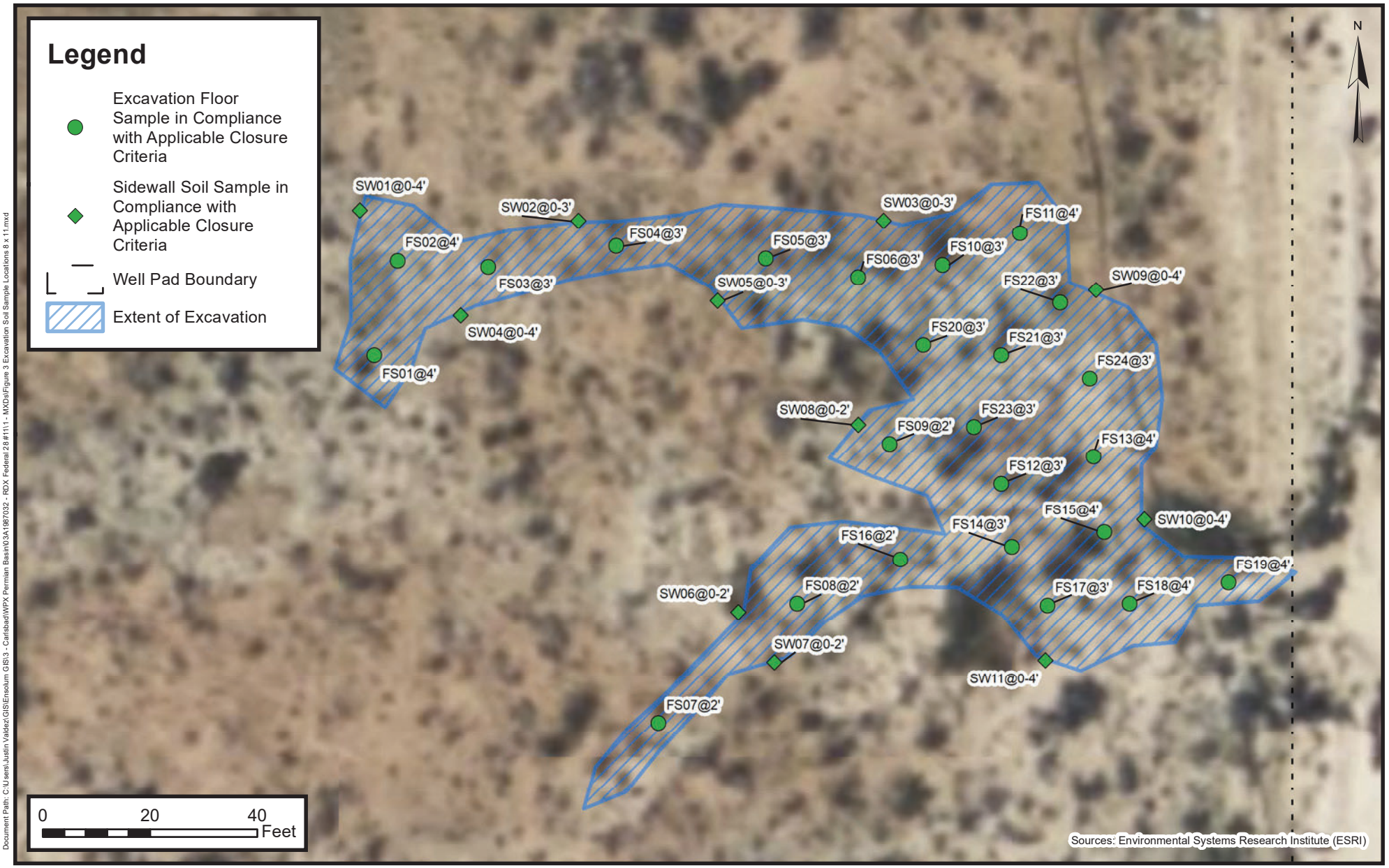
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

RDX Federal 28 #011
WPX Energy Permian, LLC
Unit D Sec 22 T26S R30E
Eddy County, New Mexico

FIGURE 2



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\WPX Permian Basin\03A1987032 - RDX Federal 28 #011\1 - MXDs\Figure 3 Excavation Soil Sample Locations 8 x 11.mxd

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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

RDX Federal 28 #011
WPX Energy Permian, LLC
Unit D Sec 22 T26S R30E
Eddy County, New Mexico

FIGURE 3

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APPENDIX B

Well Record

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: RDX Federal Com 21-43	
Date: 12/9/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, P.G.	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.022571
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-100 feet bgs		Boring Total Depth (ft. BGS): 110	Longitude: -103.884371
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 100 - 105 ft		Well Total Depth (ft. BGS): 105	Depth to Water (ft. BTOC): > 105 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SP	NS	Pale orange to tan poorly graded fine sand	
5										
10										
15										
20	NM	H	D	N	N	NM	CL	NS	Pale orange/tan/pale red clay, dry, with silt, fine sand, and minor caliche	
25	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand	
30										
35										
40										
45										
50	NM	L	D	N	N	NM	SP	NS	Golden yellow poorly graded fine sand with minor silt and clay	
55										
60										
65	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand with minor silt/clay	
70										
75										
80	NM	M	D	N	N	NM	SC	NS	Buff to orange color fine sand with medium sand and clay	
85										
90										
95	NM	H	D	N	N	NM	CL	NS	Brown orange clay with silt and fine sand	
100	NM	H	D	N	N	NM	SC	NS	Golden yellow and buff colored clay with fine sand - TD Boring: 110' BGS; Sand 110' - 105' BGS	
105										

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name:BH01	Date:9/12/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Hand Auger
Coordinates: 32.0197411, -103.8926239	Hole Diameter: 3"	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-0.5', CALICHE, dry, tan, well graded, fine-coarse, trace white subround to subangular gravel, no staining, no odor.
D	<168	0.1	N	BH01	0.5		SP-SM	0.5-1', SAND, dry, brown, poorly graded with silt, fine, trace gravel, no staining, no odor.
D	<168	0.2	N	BH01	1	1		

Total depth at 1'bgs.

ENSOLUM

	Sample Name:BH02	Date:9/12/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Hand Auger
Coordinates: 32.0197411, -103.8926239	Hole Diameter: 3"	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP-SM	0-1', SAND, dry, brown, poorly graded with silt, fine, trace white subround to subangular gravel, no staining, no odor.
D	<168	0.2	N	BH02	0.5			
D	<168	0.2	N	BH02	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH03	Date:9/12/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Hand Auger
Coordinates: 32.0197411, -103.8926239	Hole Diameter: 3"	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	
D	<168	0.2	N	BH03	0.5			0-0.5', CALICHE, dry, tan, well graded, fine-coarse, trace white subround to subangular gravel,no staining, no odor.
							SP-SM	
D	<168	0.2	N	BH03	1	1		0.5-1', SAND, dry, brown, poorly graded with silt, fine, trace gravel, no staining, no odor.

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH04	Date:9/12/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Hand Auger
Coordinates: 32.0197411, -103.8926239	Hole Diameter: 3"	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP-SM	0-1', SAND, dry, brown, poorly graded with silt, fine, no staining, no odor.
D	<168	0	N	BH04	0.5			
D	<168	0.2	N	BH04	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH05	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP-SM	0-1', SAND, dry, brown, poorly graded with silt, fine, no staining, no odor.
D	<168	0	N	BH05	0.5			
D	<168	0	N	BH05	1	1		

Total depth at 1' bgs.

ENSOLUM

	Sample Name:BH06	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP-SM	0-1', SAND, dry, brown, poorly graded with silt, fine, no staining, no odor.
D	3,052	0	N	BH06	0.5			
D	2,296	0.1	N	BH06	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH07	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, no staining, no odor.
D	3,287	0.5	N	BH07	0.5			
D	1,612	0.2	N	BH07	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH08	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, no staining, no odor.
D	414	0.5	N	BH08	0.5			
D	414	0.4	N	BH08	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH09	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, no staining, no odor.
D	1,388	0.5	N	BH09	0.5			
D	1,013	0.4	N	BH09	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH10	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, trace clay, no staining, no odor.
D	<168	0.4	N	BH10	0.5			
D	<168	0.2	N	BH10	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH11	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, trace clay, no staining, no odor.
D	<168	0.5	N	BH11	0.5			
D	<168	0.4	N	BH11	1	1		

Total depth at 1'bgs

ENSOLUM

	Sample Name:BH12	Date:9/13/2022
	Site Name: RDX Federal 28 #011	
	Incident Number: nAPP2215732821	
	Job Number: 03A1987032	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: Backhoe
Coordinates: 32.0197411, -103.8926239	Hole Diameter: N/A	Total Depth: 1'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SW-SM	0-1', SAND, dry, brown, well graded with silt, fine-coarse, trace clay, no staining, no odor.
D	<168	0.3	N	BH12	0.5			
D	<168	0.4	N	BH12	1	1		

Total depth at 1'bgs

ENSOLUM

APPENDIX D

Photographic Log

ENSOLUM

Photographic Log
WPX Energy Permian, LLC
RDX Federal 28 #011
Incident Number: nAPP2215732821

Photograph: 1 Date: 8/31/2022
Description: Site Location
View: southwest

Photograph: 2 Date: 9/8/2022
Description: Excavation activities
View: northeast

Photograph: 3 Date: 9/12/2022
Description: Excavation activities
View: southwest

Photograph: 4 Date: 10/18/2022
Description: Backfilling activities
View: northwest

ENSOLUM

APPENDIX E

Tables

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC - RDX Federal 28 #011
Eddy County, New Mexico

Ensolum Project No. 03A1987032

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Excavation Floor Soil Sample Analytical Results										
FS01	09/09/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	535
FS02	09/09/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	51.4
FS03	09/09/2022	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	21.2
FS04	09/09/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	31.3
FS05	09/09/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	37.5
FS06	09/09/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	35.0
FS07	09/12/2022	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	43.1
FS08	09/12/2022	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	38.9
FS09	09/12/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	54.3
FS10	09/12/2022	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	16.4
FS11	09/12/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	18.0
FS12	09/12/2022	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	29.9
FS13	09/12/2022	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	845
FS14	09/12/2022	3	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	27.8
FS15	09/12/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,420
FS16	09/12/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	158
FS17	09/12/2022	3	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	31.2
FS18	09/12/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	179
FS19	09/12/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,730
FS20	09/12/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	47.7
FS21	09/12/2022	3	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	24.8
FS22	09/12/2022	3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	30.2
FS23	09/12/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	30.8
FS24	09/12/2022	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	121

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC - RDX Federal 28 #011
Eddy County, New Mexico

Ensolum Project No. 03A1987032

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Excavation Sidewall Soil Sample Analytical Results										
SW01	09/09/2022	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	118
SW02	09/09/2022	0 - 3	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	41.7
SW03	09/09/2022	0 - 3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	41.2
SW04	09/12/2022	0 - 4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	37.1
SW05	09/12/2022	0 - 3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	28.6
SW06	09/12/2022	0 - 2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	20.5
SW07	09/12/2022	0 - 2	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	21.3
SW08	09/12/2022	0 - 2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	35.0
SW09	09/12/2022	0 - 4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	15.5
SW10	09/12/2022	0 - 4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	13.7
SW11	09/12/2022	0 - 4	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	30.8
Delineation Soil Sample Analytical Results										
BH01	09/12/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	15.8
BH01	09/12/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	28.2
BH02	09/12/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	20.3
BH02	09/12/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	42.2
BH03	09/12/2022	0.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	40.6
BH03	09/12/2022	1	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	53.5
BH04	09/12/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	8.80
BH04	09/12/2022	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	9.52
BH05	09/13/2022	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	26.1
BH05	09/13/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	144
BH06	09/13/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,380
BH06	09/13/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,940
BH07	09/13/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,940
BH07	09/13/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,750

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC - RDX Federal 28 #011
Eddy County, New Mexico

Ensolum Project No. 03A1987032

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
BH08	09/13/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	1,310
BH08	09/13/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	668
BH09	09/13/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	1,390
BH09	09/13/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,050
BH10	09/13/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	71.0
BH10	09/13/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	57.3
BH11	09/13/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	19.3
BH11	09/13/2022	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	18.1
BH12	09/13/2022	0.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	142
BH12	09/13/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	139

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

*Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria and/or Reclamation Standard for Soils Impacted by a Release*

ENSOLUM

APPENDIX F

Laboratory Analytical Reports & Chain-of-Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2933-1
Laboratory Sample Delivery Group: 03A1987032
Client Project/Site: RDX Federal 28 #011H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Devon Team

JKramer

Authorized for release by:
9/22/2022 7:07:56 PM

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

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

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

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Laboratory Job ID: 890-2933-1
SDG: 03A1987032

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2933-1
Project/Site: RDX Federal 28 #011H SDG: 03A1987032

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
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 Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Job ID: 890-2933-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2933-1

Receipt
The samples were received on 9/12/2022 11:23 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 5.0°C

GC VOA
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 was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: (890-2933-A-1-B MS) and (890-2933-A-1-C MSD). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34416 and analytical batch 880-34433 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.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-34495/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-19130-A-12-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34495 and analytical batch 880-34439 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34495 and analytical batch 880-34439 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 Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS01

Lab Sample ID: 890-2933-1
Matrix: Solid
Date Collected: 09/09/22 09:00
Date Received: 09/12/22 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 16:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 16:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 16:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 16:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 16:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:50*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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		09/13/22 15:30	09/14/22 10:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9		mg/Kg		09/13/22 15:30	09/14/22 10:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 15:30	09/14/22 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*09/13/22 15:30*	*09/14/22 10:57*	*1*
o-Terphenyl	*83*		*70 - 130*	*09/13/22 15:30*	*09/14/22 10:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**535**		50.4		mg/Kg			09/17/22 05:12	10

Client Sample ID: FS02

Lab Sample ID: 890-2933-2
Matrix: Solid
Date Collected: 09/09/22 09:10
Date Received: 09/12/22 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/20/22 13:33	09/22/22 17:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/20/22 13:33	09/22/22 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:11*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS02

Lab Sample ID: 890-2933-2
Matrix: Solid
Date Collected: 09/09/22 09:10
Date Received: 09/12/22 11:23
Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:11*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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		09/13/22 15:30	09/14/22 12:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 15:30	09/14/22 12:00	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 15:30	09/14/22 12:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*88*		*70 - 130*	*09/13/22 15:30*	*09/14/22 12:00*	*1*
o-Terphenyl	*87*		*70 - 130*	*09/13/22 15:30*	*09/14/22 12:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.4**		5.02		mg/Kg			09/17/22 05:26	1

Client Sample ID: FS03

Lab Sample ID: 890-2933-3
Matrix: Solid
Date Collected: 09/09/22 09:20
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 17:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 17:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 17:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 17:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 17:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 17:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:31*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:31*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS03

Lab Sample ID: 890-2933-3
Matrix: Solid
Date Collected: 09/09/22 09:20
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 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		09/13/22 15:30	09/14/22 12:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 15:30	09/14/22 12:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 15:30	09/14/22 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*09/13/22 15:30*	*09/14/22 12:21*	*1*
o-Terphenyl	*82*		*70 - 130*	*09/13/22 15:30*	*09/14/22 12:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.2**		4.97		mg/Kg			09/17/22 05:31	1

Client Sample ID: FS04

Lab Sample ID: 890-2933-4
Matrix: Solid
Date Collected: 09/09/22 09:30
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:52	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 17:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 17:52	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:52*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/20/22 13:33*	*09/22/22 17:52*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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 *1	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*09/14/22 11:55*	*09/15/22 01:25*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/14/22 11:55*	*09/15/22 01:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS04

Lab Sample ID: 890-2933-4
Matrix: Solid
Date Collected: 09/09/22 09:30
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.3		4.96		mg/Kg			09/17/22 05:36	1

Client Sample ID: FS05

Lab Sample ID: 890-2933-5
Matrix: Solid
Date Collected: 09/09/22 11:00
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 18:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:12*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:12*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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 *1	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/15/22 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*09/14/22 11:55*	*09/15/22 01:47*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/14/22 11:55*	*09/15/22 01:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.5		4.96		mg/Kg			09/17/22 05:41	1

Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS06

Lab Sample ID: 890-2933-6
Matrix: Solid
Date Collected: 09/09/22 11:10
Date Received: 09/12/22 11:23
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 18:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 18:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:33*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:33*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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		09/13/22 15:37	09/14/22 17:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 15:37	09/14/22 17:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 15:37	09/14/22 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/13/22 15:37*	*09/14/22 17:35*	*1*
o-Terphenyl	*120*		*70 - 130*	*09/13/22 15:37*	*09/14/22 17:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35.0**		4.99		mg/Kg			09/17/22 05:55	1

Client Sample ID: SW01

Lab Sample ID: 890-2933-7
Matrix: Solid
Date Collected: 09/09/22 11:05
Date Received: 09/12/22 11:23
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 18:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 18:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 18:53	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 18:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 18:53	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:53*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: SW01

Lab Sample ID: 890-2933-7
Matrix: Solid
Date Collected: 09/09/22 11:05
Date Received: 09/12/22 11:23
Sample Depth: 0 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/20/22 13:33*	*09/22/22 18:53*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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		09/13/22 15:37	09/14/22 17:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 15:37	09/14/22 17:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 15:37	09/14/22 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*114*		*70 - 130*	*09/13/22 15:37*	*09/14/22 17:56*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/13/22 15:37*	*09/14/22 17:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**118**		5.02		mg/Kg			09/17/22 06:00	1

Client Sample ID: SW02

Lab Sample ID: 890-2933-8
Matrix: Solid
Date Collected: 09/09/22 11:20
Date Received: 09/12/22 11:23
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 19:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 19:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 19:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 19:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 19:14	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*09/20/22 13:33*	*09/22/22 19:14*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/20/22 13:33*	*09/22/22 19:14*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: SW02

Lab Sample ID: 890-2933-8
Matrix: Solid
Date Collected: 09/09/22 11:20
Date Received: 09/12/22 11:23
Sample Depth: 0 - 3

Method: 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		09/13/22 15:37	09/14/22 18:17	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/13/22 15:37	09/14/22 18:17	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/13/22 15:37	09/14/22 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/13/22 15:37*	*09/14/22 18:17*	*1*
o-Terphenyl	*120*		*70 - 130*	*09/13/22 15:37*	*09/14/22 18:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.7**		5.01		mg/Kg			09/17/22 06:05	1

Client Sample ID: SW03

Lab Sample ID: 890-2933-9
Matrix: Solid
Date Collected: 09/09/22 11:30
Date Received: 09/12/22 11:23
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 19:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 19:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 19:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/20/22 13:33	09/22/22 19:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 19:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/20/22 13:33	09/22/22 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/20/22 13:33*	*09/22/22 19:34*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*09/20/22 13:33*	*09/22/22 19:34*	*1*

Method: 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			09/22/22 19:56	1

Method: 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			09/14/22 17:04	1

Method: 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		09/13/22 15:37	09/14/22 18:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 15:37	09/14/22 18:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 15:37	09/14/22 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/13/22 15:37*	*09/14/22 18:38*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/13/22 15:37*	*09/14/22 18:38*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: SW03
Date Collected: 09/09/22 11:30
Date Received: 09/12/22 11:23
Sample Depth: 0 - 3

Lab Sample ID: 890-2933-9
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.2		5.05		mg/Kg			09/17/22 06:10	1

Surrogate Summary

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2933-1	FS01	111	92
890-2933-2	FS02	97	71
890-2933-3	FS03	104	79
890-2933-4	FS04	104	72
890-2933-5	FS05	113	88
890-2933-6	FS06	111	91
890-2933-7	SW01	113	89
890-2933-8	SW02	110	89
890-2933-9	SW03	104	70

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-19130-A-12-E MS	Matrix Spike	92	84
880-19130-A-12-F MSD	Matrix Spike Duplicate	94	87
890-2931-A-1-C MS	Matrix Spike	106	95
890-2931-A-1-D MSD	Matrix Spike Duplicate	106	95
890-2933-1	FS01	83	83
890-2933-1 MS	FS01	73	66 S1-
890-2933-1 MSD	FS01	78	68 S1-
890-2933-2	FS02	88	87
890-2933-3	FS03	85	82
890-2933-4	FS04	118	119
890-2933-5	FS05	110	110
890-2933-6	FS06	120	120
890-2933-7	SW01	114	116
890-2933-8	SW02	120	120
890-2933-9	SW03	113	113
LCS 880-34416/2-A	Lab Control Sample	96	98
LCS 880-34417/2-A	Lab Control Sample	99	109
LCS 880-34495/2-A	Lab Control Sample	147 S1+	151 S1+
LCSD 880-34416/3-A	Lab Control Sample Dup	81	82
LCSD 880-34417/3-A	Lab Control Sample Dup	97	107
LCSD 880-34495/3-A	Lab Control Sample Dup	127	130
MB 880-34416/1-A	Method Blank	109	111
MB 880-34417/1-A	Method Blank	115	120
MB 880-34495/1-A	Method Blank	121	125

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Lab Sample ID: MB 880-34416/1-A
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34416

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		09/13/22 15:30	09/14/22 09:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 15:30	09/14/22 09:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 15:30	09/14/22 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/13/22 15:30*	*09/14/22 09:53*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/13/22 15:30*	*09/14/22 09:53*	*1*

Lab Sample ID: LCS 880-34416/2-A
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34416

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1035		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1127		mg/Kg		113	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: LCSD 880-34416/3-A
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34416

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	879.7		mg/Kg		88	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	1000	920.3		mg/Kg		92	70 - 130	20	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: 890-2933-1 MS
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34416

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	781.2		mg/Kg		78	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	996	640.2	F1	mg/Kg		63	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Lab Sample ID: 890-2933-1 MS
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34416

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	73		70 - 130
o-Terphenyl	66	S1-	70 - 130

Lab Sample ID: 890-2933-1 MSD
Matrix: Solid
Analysis Batch: 34433

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34416

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	<49.9	U	999	829.0		mg/Kg		83	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	662.5	F1	mg/Kg		65	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	78		70 - 130
o-Terphenyl	68	S1-	70 - 130

Lab Sample ID: MB 880-34417/1-A
Matrix: Solid
Analysis Batch: 34435

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34417

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		09/13/22 15:37	09/14/22 09:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 15:37	09/14/22 09:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 15:37	09/14/22 09:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	09/13/22 15:37	09/14/22 09:53	1
o-Terphenyl	120		70 - 130	09/13/22 15:37	09/14/22 09:53	1

Lab Sample ID: LCS 880-34417/2-A
Matrix: Solid
Analysis Batch: 34435

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1047		mg/Kg		105	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1022		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	109		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Lab Sample ID: LCSD 880-34417/3-A
Matrix: Solid
Analysis Batch: 34435

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34417

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	970.3		mg/Kg		97	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 890-2931-A-1-C MS
Matrix: Solid
Analysis Batch: 34435

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1098		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	958.6		mg/Kg		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-2931-A-1-D MSD
Matrix: Solid
Analysis Batch: 34435

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34417

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	<49.9	U	999	1097		mg/Kg		108	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	961.7		mg/Kg		96	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: MB 880-34495/1-A
Matrix: Solid
Analysis Batch: 34439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34495

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		09/14/22 11:55	09/14/22 19:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/14/22 19:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/14/22 11:55	09/14/22 19:42	1

QC Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Lab Sample ID: MB 880-34495/1-A
Matrix: Solid
Analysis Batch: 34439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34495

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	09/14/22 11:55	09/14/22 19:42	1
o-Terphenyl	125		70 - 130	09/14/22 11:55	09/14/22 19:42	1

Lab Sample ID: LCS 880-34495/2-A
Matrix: Solid
Analysis Batch: 34439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34495

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1079		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1089		mg/Kg		109	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	147	S1+	70 - 130
o-Terphenyl	151	S1+	70 - 130

Lab Sample ID: LCSD 880-34495/3-A
Matrix: Solid
Analysis Batch: 34439

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34495

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	874.7	*1	mg/Kg		87	70 - 130	21	20
Diesel Range Organics (Over C10-C28)			1000	949.4		mg/Kg		95	70 - 130	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: 880-19130-A-12-E MS
Matrix: Solid
Analysis Batch: 34439

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 F1	996	611.6	F1	mg/Kg		59	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	885.8		mg/Kg		86	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	84		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Lab Sample ID: 880-19130-A-12-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34439 — **Prep Batch: 34495**

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	<49.9	U *1 F1	999	623.4	F1	mg/Kg		60	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	911.6		mg/Kg		89	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34526/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/17/22 04:57	1

Lab Sample ID: LCS 880-34526/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	255.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-34526/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34646

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	255.7		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-2933-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	535		2520	3133		mg/Kg		103	90 - 110

Lab Sample ID: 890-2933-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	535		2520	3136		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

GC VOA

Prep Batch: 34943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	5035	
890-2933-2	FS02	Total/NA	Solid	5035	
890-2933-3	FS03	Total/NA	Solid	5035	
890-2933-4	FS04	Total/NA	Solid	5035	
890-2933-5	FS05	Total/NA	Solid	5035	
890-2933-6	FS06	Total/NA	Solid	5035	
890-2933-7	SW01	Total/NA	Solid	5035	
890-2933-8	SW02	Total/NA	Solid	5035	
890-2933-9	SW03	Total/NA	Solid	5035	

Analysis Batch: 35129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	8021B	34943
890-2933-2	FS02	Total/NA	Solid	8021B	34943
890-2933-3	FS03	Total/NA	Solid	8021B	34943
890-2933-4	FS04	Total/NA	Solid	8021B	34943
890-2933-5	FS05	Total/NA	Solid	8021B	34943
890-2933-6	FS06	Total/NA	Solid	8021B	34943
890-2933-7	SW01	Total/NA	Solid	8021B	34943
890-2933-8	SW02	Total/NA	Solid	8021B	34943
890-2933-9	SW03	Total/NA	Solid	8021B	34943

Analysis Batch: 35217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	Total BTEX	
890-2933-2	FS02	Total/NA	Solid	Total BTEX	
890-2933-3	FS03	Total/NA	Solid	Total BTEX	
890-2933-4	FS04	Total/NA	Solid	Total BTEX	
890-2933-5	FS05	Total/NA	Solid	Total BTEX	
890-2933-6	FS06	Total/NA	Solid	Total BTEX	
890-2933-7	SW01	Total/NA	Solid	Total BTEX	
890-2933-8	SW02	Total/NA	Solid	Total BTEX	
890-2933-9	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	8015NM Prep	
890-2933-2	FS02	Total/NA	Solid	8015NM Prep	
890-2933-3	FS03	Total/NA	Solid	8015NM Prep	
MB 880-34416/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34416/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34416/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2933-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-2933-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Prep Batch: 34417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-6	FS06	Total/NA	Solid	8015NM Prep	
890-2933-7	SW01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

GC Semi VOA (Continued)

Prep Batch: 34417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-8	SW02	Total/NA	Solid	8015NM Prep	
890-2933-9	SW03	Total/NA	Solid	8015NM Prep	
MB 880-34417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2931-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2931-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	8015B NM	34416
890-2933-2	FS02	Total/NA	Solid	8015B NM	34416
890-2933-3	FS03	Total/NA	Solid	8015B NM	34416
MB 880-34416/1-A	Method Blank	Total/NA	Solid	8015B NM	34416
LCS 880-34416/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34416
LCSD 880-34416/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34416
890-2933-1 MS	FS01	Total/NA	Solid	8015B NM	34416
890-2933-1 MSD	FS01	Total/NA	Solid	8015B NM	34416

Analysis Batch: 34435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-6	FS06	Total/NA	Solid	8015B NM	34417
890-2933-7	SW01	Total/NA	Solid	8015B NM	34417
890-2933-8	SW02	Total/NA	Solid	8015B NM	34417
890-2933-9	SW03	Total/NA	Solid	8015B NM	34417
MB 880-34417/1-A	Method Blank	Total/NA	Solid	8015B NM	34417
LCS 880-34417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34417
LCSD 880-34417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34417
890-2931-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34417
890-2931-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34417

Analysis Batch: 34439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-4	FS04	Total/NA	Solid	8015B NM	34495
890-2933-5	FS05	Total/NA	Solid	8015B NM	34495
MB 880-34495/1-A	Method Blank	Total/NA	Solid	8015B NM	34495
LCS 880-34495/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34495
LCSD 880-34495/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34495
880-19130-A-12-E MS	Matrix Spike	Total/NA	Solid	8015B NM	34495
880-19130-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34495

Prep Batch: 34495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-4	FS04	Total/NA	Solid	8015NM Prep	
890-2933-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-34495/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34495/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34495/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-19130-A-12-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-19130-A-12-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

GC Semi VOA

Analysis Batch: 34530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Total/NA	Solid	8015 NM	
890-2933-2	FS02	Total/NA	Solid	8015 NM	
890-2933-3	FS03	Total/NA	Solid	8015 NM	
890-2933-4	FS04	Total/NA	Solid	8015 NM	
890-2933-5	FS05	Total/NA	Solid	8015 NM	
890-2933-6	FS06	Total/NA	Solid	8015 NM	
890-2933-7	SW01	Total/NA	Solid	8015 NM	
890-2933-8	SW02	Total/NA	Solid	8015 NM	
890-2933-9	SW03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Soluble	Solid	DI Leach	
890-2933-2	FS02	Soluble	Solid	DI Leach	
890-2933-3	FS03	Soluble	Solid	DI Leach	
890-2933-4	FS04	Soluble	Solid	DI Leach	
890-2933-5	FS05	Soluble	Solid	DI Leach	
890-2933-6	FS06	Soluble	Solid	DI Leach	
890-2933-7	SW01	Soluble	Solid	DI Leach	
890-2933-8	SW02	Soluble	Solid	DI Leach	
890-2933-9	SW03	Soluble	Solid	DI Leach	
MB 880-34526/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34526/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34526/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2933-1 MS	FS01	Soluble	Solid	DI Leach	
890-2933-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 34646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2933-1	FS01	Soluble	Solid	300.0	34526
890-2933-2	FS02	Soluble	Solid	300.0	34526
890-2933-3	FS03	Soluble	Solid	300.0	34526
890-2933-4	FS04	Soluble	Solid	300.0	34526
890-2933-5	FS05	Soluble	Solid	300.0	34526
890-2933-6	FS06	Soluble	Solid	300.0	34526
890-2933-7	SW01	Soluble	Solid	300.0	34526
890-2933-8	SW02	Soluble	Solid	300.0	34526
890-2933-9	SW03	Soluble	Solid	300.0	34526
MB 880-34526/1-A	Method Blank	Soluble	Solid	300.0	34526
LCS 880-34526/2-A	Lab Control Sample	Soluble	Solid	300.0	34526
LCSD 880-34526/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34526
890-2933-1 MS	FS01	Soluble	Solid	300.0	34526
890-2933-1 MSD	FS01	Soluble	Solid	300.0	34526

Lab Chronicle

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS01
Date Collected: 09/09/22 09:00
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-1
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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 16:50	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34416	09/13/22 15:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34433	09/14/22 10:57	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		10			34646	09/17/22 05:12	CH	EET MID

Client Sample ID: FS02
Date Collected: 09/09/22 09:10
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-2
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			5.01 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 17:11	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34416	09/13/22 15:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34433	09/14/22 12:00	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 05:26	CH	EET MID

Client Sample ID: FS03
Date Collected: 09/09/22 09:20
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-3
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			4.97 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 17:31	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34416	09/13/22 15:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34433	09/14/22 12:21	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 05:31	CH	EET MID

Client Sample ID: FS04
Date Collected: 09/09/22 09:30
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-4
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			4.99 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 17:52	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: FS04
Date Collected: 09/09/22 09:30
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-4
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			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34495	09/14/22 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34439	09/15/22 01:25	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 05:36	CH	EET MID

Client Sample ID: FS05
Date Collected: 09/09/22 11:00
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-5
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			5.02 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 18:12	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34495	09/14/22 11:55	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34439	09/15/22 01:47	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 05:41	CH	EET MID

Client Sample ID: FS06
Date Collected: 09/09/22 11:10
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-6
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			5.03 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 18:33	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34417	09/13/22 15:37	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34435	09/14/22 17:35	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 05:55	CH	EET MID

Client Sample ID: SW01
Date Collected: 09/09/22 11:05
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-7
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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 18:53	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34417	09/13/22 15:37	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34435	09/14/22 17:56	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Client Sample ID: SW01

Date Collected: 09/09/22 11:05
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 06:00	CH	EET MID

Client Sample ID: SW02

Date Collected: 09/09/22 11:20
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-8
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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 19:14	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34417	09/13/22 15:37	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34435	09/14/22 18:17	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 06:05	CH	EET MID

Client Sample ID: SW03

Date Collected: 09/09/22 11:30
Date Received: 09/12/22 11:23

Lab Sample ID: 890-2933-9
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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 19:34	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35217	09/22/22 19:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34530	09/14/22 17:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34417	09/13/22 15:37	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34435	09/14/22 18:38	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34526	09/14/22 16:43	KS	EET MID
Soluble	Analysis	300.0		1			34646	09/17/22 06:10	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 Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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

Method Summary

Client: Ensolum
Project/Site: RDX Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

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 Federal 28 #011H

Job ID: 890-2933-1
SDG: 03A1987032

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2933-1	FS01	Solid	09/09/22 09:00	09/12/22 11:23	4
890-2933-2	FS02	Solid	09/09/22 09:10	09/12/22 11:23	4
890-2933-3	FS03	Solid	09/09/22 09:20	09/12/22 11:23	3
890-2933-4	FS04	Solid	09/09/22 09:30	09/12/22 11:23	3
890-2933-5	FS05	Solid	09/09/22 11:00	09/12/22 11:23	3
890-2933-6	FS06	Solid	09/09/22 11:10	09/12/22 11:23	3
890-2933-7	SW01	Solid	09/09/22 11:05	09/12/22 11:23	0 - 4
890-2933-8	SW02	Solid	09/09/22 11:20	09/12/22 11:23	0 - 3
890-2933-9	SW03	Solid	09/09/22 11:30	09/12/22 11:23	0 - 3

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Chain of Custody

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

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@dvn.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	☑ Routine ☐ Rush
Project Number:	03A1987032	Due Date:	5 Day TAT
Project Location:	Rural Eddy, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Gilbert Moreno		
CC #:	1061174901		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TVM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS01	S	9.9.22	9:00	4'	Comp	1		X	X	X	
FS02			9:10	4'							
FS03			9:20	3'							Incident ID
FS04			9:30	3'							nAPP2215732821
FS05			11:00	3'							
FS06			11:10	3'							
SW01			11:15	0-4'							
~~SW02~~			11:20	0-3'							
SW03			11:30	0-3'							

890-2933 Chain of Custody

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 Tl 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 Tl 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		9.12.22 1123	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2933-1
SDG Number: 03A1987032

Login Number: 2933
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2933-1
SDG Number: 03A1987032

Login Number: 2933
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/13/22 10:37 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2940-1
Laboratory Sample Delivery Group: 03A1987032
Client Project/Site: RDX FEDERAL 28 #011H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Devon Team

JKramer

Authorized for release by:
9/26/2022 11:48:40 AM

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

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

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

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Laboratory Job ID: 890-2940-1
SDG: 03A1987032

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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 FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Job ID: 890-2940-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2940-1

Receipt
The samples were received on 9/13/2022 8:26 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 1.6°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-35092/1-A) and (LCSD 880-35092/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-2940-A-1-E MS) and (890-2940-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW05 (890-2940-2), SW06 (890-2940-3), SW07 (890-2940-4), SW08 (890-2940-5), SW09 (890-2940-6) and SW10 (890-2940-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-35092 and analytical batch 880-35226 recovered outside control limits for the following analytes: Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-35092 and analytical batch 880-35226. The associated laboratory control sample (LCS) met acceptance criteria.

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 surrogate recovery for the blank associated with preparation batch 880-34601 and analytical batch 880-34628 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-34601/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34601 and analytical batch 880-34628 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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 FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW04

Lab Sample ID: 890-2940-1
Matrix: Solid
Date Collected: 09/12/22 09:20
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U F2 F1	0.00202		mg/Kg		09/21/22 15:19	09/23/22 11:40	1
Toluene	<0.00202	U F2 F1	0.00202		mg/Kg		09/21/22 15:19	09/23/22 11:40	1
Ethylbenzene	<0.00202	U *+ F2 F1	0.00202		mg/Kg		09/21/22 15:19	09/23/22 11:40	1
m-Xylene & p-Xylene	<0.00403	U *+ F2 F1	0.00403		mg/Kg		09/21/22 15:19	09/23/22 11:40	1
o-Xylene	<0.00202	U *+ F2 F1	0.00202		mg/Kg		09/21/22 15:19	09/23/22 11:40	1
Xylenes, Total	<0.00403	U *+ F2 F1	0.00403		mg/Kg		09/21/22 15:19	09/23/22 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:40*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:40*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 08:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 08:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 08:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/15/22 15:04*	*09/16/22 08:33*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/15/22 15:04*	*09/16/22 08:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37.1**		4.98		mg/Kg			09/19/22 10:00	1

Client Sample ID: SW05

Lab Sample ID: 890-2940-2
Matrix: Solid
Date Collected: 09/12/22 09:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 12:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 12:02	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 12:02	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 12:02	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 12:02	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 12:02*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW05

Lab Sample ID: 890-2940-2
Matrix: Solid
Date Collected: 09/12/22 09:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*09/21/22 15:19*	*09/23/22 12:02*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 09:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 09:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 09:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/15/22 15:04*	*09/16/22 09:43*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/15/22 15:04*	*09/16/22 09:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28.6**		5.05		mg/Kg			09/19/22 10:04	1

Client Sample ID: SW06

Lab Sample ID: 890-2940-3
Matrix: Solid
Date Collected: 09/12/22 09:40
Date Received: 09/13/22 08:26
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 12:22	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 12:22	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 12:22	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 12:22	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 12:22	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*195*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 12:22*	*1*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*	*09/21/22 15:19*	*09/23/22 12:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW06

Lab Sample ID: 890-2940-3
Matrix: Solid
Date Collected: 09/12/22 09:40
Date Received: 09/13/22 08:26
Sample Depth: 0 - 2

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:05*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.5**		5.01		mg/Kg			09/19/22 10:09	1

Client Sample ID: SW07

Lab Sample ID: 890-2940-4
Matrix: Solid
Date Collected: 09/12/22 09:50
Date Received: 09/13/22 08:26
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 12:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 12:43	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 12:43	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		09/21/22 15:19	09/23/22 12:43	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 12:43	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		09/21/22 15:19	09/23/22 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 12:43*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/21/22 15:19*	*09/23/22 12:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 10:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 10:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 10:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:26*	*1*
o-Terphenyl	*104*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW07

Lab Sample ID: 890-2940-4
Matrix: Solid
Date Collected: 09/12/22 09:50
Date Received: 09/13/22 08:26
Sample Depth: 0 - 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.3		4.98		mg/Kg			09/19/22 10:24	1

Client Sample ID: SW08

Lab Sample ID: 890-2940-5
Matrix: Solid
Date Collected: 09/12/22 10:10
Date Received: 09/13/22 08:26
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/21/22 15:19	09/23/22 13:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/21/22 15:19	09/23/22 13:04	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		09/21/22 15:19	09/23/22 13:04	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		09/21/22 15:19	09/23/22 13:04	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		09/21/22 15:19	09/23/22 13:04	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		09/21/22 15:19	09/23/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 13:04*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/21/22 15:19*	*09/23/22 13:04*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 10:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:48*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/15/22 15:04*	*09/16/22 10:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.0		5.05		mg/Kg			09/19/22 10:29	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW09

Lab Sample ID: 890-2940-6
Matrix: Solid
Date Collected: 09/12/22 10:20
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 13:24	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 13:24	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 13:24	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 13:24	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 13:24	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*165*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 13:24*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*09/21/22 15:19*	*09/23/22 13:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:10*	*1*
o-Terphenyl	*99*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.5**		5.02		mg/Kg			09/19/22 14:43	1

Client Sample ID: SW10

Lab Sample ID: 890-2940-7
Matrix: Solid
Date Collected: 09/12/22 10:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 13:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 13:45	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 13:45	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		09/21/22 15:19	09/23/22 13:45	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 13:45	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		09/21/22 15:19	09/23/22 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*194*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 13:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW10

Lab Sample ID: 890-2940-7
Matrix: Solid
Date Collected: 09/12/22 10:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*09/21/22 15:19*	*09/23/22 13:45*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 11:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:31*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.7**		5.03		mg/Kg			09/19/22 14:48	1

Client Sample ID: SW11

Lab Sample ID: 890-2940-8
Matrix: Solid
Date Collected: 09/12/22 14:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/21/22 15:19	09/23/22 16:10	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/21/22 15:19	09/23/22 16:10	1
Ethylbenzene	<0.00202	U *+	0.00202		mg/Kg		09/21/22 15:19	09/23/22 16:10	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		09/21/22 15:19	09/23/22 16:10	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		09/21/22 15:19	09/23/22 16:10	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		09/21/22 15:19	09/23/22 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*09/21/22 15:19*	*09/23/22 16:10*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*09/21/22 15:19*	*09/23/22 16:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW11
Date Collected: 09/12/22 14:30
Date Received: 09/13/22 08:26
Sample Depth: 0 - 4

Lab Sample ID: 890-2940-8
Matrix: Solid

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 11:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 11:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:53*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/15/22 15:04*	*09/16/22 11:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.8**		5.03		mg/Kg			09/19/22 10:53	1

Surrogate Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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)
890-2940-1	SW04	125	97
890-2940-1 MS	SW04	172 S1+	123
890-2940-1 MSD	SW04	173 S1+	142 S1+
890-2940-2	SW05	162 S1+	96
890-2940-3	SW06	195 S1+	124
890-2940-4	SW07	158 S1+	103
890-2940-5	SW08	142 S1+	100
890-2940-6	SW09	165 S1+	119
890-2940-7	SW10	194 S1+	121
890-2940-8	SW11	120	111
LCS 880-35092/1-A	Lab Control Sample	138 S1+	126
LCSD 880-35092/2-A	Lab Control Sample Dup	166 S1+	136 S1+
MB 880-35092/5-A	Method Blank	121	113

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)
890-2940-1	SW04	96	103
890-2940-1 MS	SW04	90	85
890-2940-1 MSD	SW04	91	84
890-2940-2	SW05	102	109
890-2940-3	SW06	103	113
890-2940-4	SW07	96	104
890-2940-5	SW08	102	114
890-2940-6	SW09	89	99
890-2940-7	SW10	102	113
890-2940-8	SW11	98	108
LCS 880-34601/2-A	Lab Control Sample	118	132 S1+
LCSD 880-34601/3-A	Lab Control Sample Dup	99	110
MB 880-34601/1-A	Method Blank	133 S1+	151 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35092/5-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 15:19	09/23/22 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:20*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:20*	*1*

Lab Sample ID: LCS 880-35092/1-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09803		mg/Kg		98	70 - 130
Toluene	0.100	0.09879		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1144		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2610	*+	mg/Kg		131	70 - 130
o-Xylene	0.100	0.1269		mg/Kg		127	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*

Lab Sample ID: LCSD 880-35092/2-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	14	35
Toluene	0.100	0.1105		mg/Kg		110	70 - 130	11	35
Ethylbenzene	0.100	0.1355	*+	mg/Kg		136	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.3060	*+	mg/Kg		153	70 - 130	16	35
o-Xylene	0.100	0.1482	*+	mg/Kg		148	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*166*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*136*	*S1+*	*70 - 130*

Lab Sample ID: 890-2940-1 MS
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: SW04
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F2 F1	0.101	<0.00202	U F1	mg/Kg		0.8	70 - 130
Toluene	<0.00202	U F2 F1	0.101	0.003123	F1	mg/Kg		3	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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

Lab Sample ID: 890-2940-1 MS
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: SW04
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U *+ F2 F1	0.101	0.003518	F1	mg/Kg		3	70 - 130
m-Xylene & p-Xylene	<0.00403	U *+ F2 F1	0.202	0.007024	F1	mg/Kg		3	70 - 130
o-Xylene	<0.00202	U *+ F2 F1	0.101	0.005178	F1	mg/Kg		5	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*172*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 890-2940-1 MSD
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: SW04
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F2 F1	0.0996	0.02824	F2 F1	mg/Kg		28	70 - 130	188	35
Toluene	<0.00202	U F2 F1	0.0996	0.03493	F2 F1	mg/Kg		35	70 - 130	167	35
Ethylbenzene	<0.00202	U *+ F2 F1	0.0996	0.04667	F2 F1	mg/Kg		47	70 - 130	172	35
m-Xylene & p-Xylene	<0.00403	U *+ F2 F1	0.199	0.1134	F2 F1	mg/Kg		57	70 - 130	177	35
o-Xylene	<0.00202	U *+ F2 F1	0.0996	0.06160	F2 F1	mg/Kg		62	70 - 130	169	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*142*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-34601/1-A
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34601

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		09/15/22 15:04	09/16/22 07:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 07:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 07:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/15/22 15:04*	*09/16/22 07:29*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*09/15/22 15:04*	*09/16/22 07:29*	*1*

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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

Lab Sample ID: LCS 880-34601/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34628 — **Prep Batch: 34601**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	988.0		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	909.1		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*132*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-34601/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34628 — **Prep Batch: 34601**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	720.6	*1	mg/Kg		72	70 - 130	31	20
Diesel Range Organics (Over C10-C28)			1000	752.2		mg/Kg		75	70 - 130	19	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: 890-2940-1 MS — **Client Sample ID: SW04**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34628 — **Prep Batch: 34601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	996	866.0		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1008		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-2940-1 MSD — **Client Sample ID: SW04**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34628 — **Prep Batch: 34601**

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	<49.9	U *1	999	920.4		mg/Kg		90	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1015		mg/Kg		99	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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

Lab Sample ID: 890-2940-1 MSD
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: SW04
Prep Type: Total/NA
Prep Batch: 34601

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	*84*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34507/1-A
Matrix: Solid
Analysis Batch: 34836

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			09/19/22 08:46	1

Lab Sample ID: LCS 880-34507/2-A
Matrix: Solid
Analysis Batch: 34836

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.3		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-34507/3-A
Matrix: Solid
Analysis Batch: 34836

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	247.4		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2940-3 MS
Matrix: Solid
Analysis Batch: 34836

Client Sample ID: SW06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	20.5		251	271.7		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2940-3 MSD
Matrix: Solid
Analysis Batch: 34836

Client Sample ID: SW06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	20.5		251	271.8		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

GC VOA

Prep Batch: 35092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	5035	
890-2940-2	SW05	Total/NA	Solid	5035	
890-2940-3	SW06	Total/NA	Solid	5035	
890-2940-4	SW07	Total/NA	Solid	5035	
890-2940-5	SW08	Total/NA	Solid	5035	
890-2940-6	SW09	Total/NA	Solid	5035	
890-2940-7	SW10	Total/NA	Solid	5035	
890-2940-8	SW11	Total/NA	Solid	5035	
MB 880-35092/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35092/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35092/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2940-1 MS	SW04	Total/NA	Solid	5035	
890-2940-1 MSD	SW04	Total/NA	Solid	5035	

Analysis Batch: 35226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	8021B	35092
890-2940-2	SW05	Total/NA	Solid	8021B	35092
890-2940-3	SW06	Total/NA	Solid	8021B	35092
890-2940-4	SW07	Total/NA	Solid	8021B	35092
890-2940-5	SW08	Total/NA	Solid	8021B	35092
890-2940-6	SW09	Total/NA	Solid	8021B	35092
890-2940-7	SW10	Total/NA	Solid	8021B	35092
890-2940-8	SW11	Total/NA	Solid	8021B	35092
MB 880-35092/5-A	Method Blank	Total/NA	Solid	8021B	35092
LCS 880-35092/1-A	Lab Control Sample	Total/NA	Solid	8021B	35092
LCSD 880-35092/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35092
890-2940-1 MS	SW04	Total/NA	Solid	8021B	35092
890-2940-1 MSD	SW04	Total/NA	Solid	8021B	35092

Analysis Batch: 35401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	Total BTEX	
890-2940-2	SW05	Total/NA	Solid	Total BTEX	
890-2940-3	SW06	Total/NA	Solid	Total BTEX	
890-2940-4	SW07	Total/NA	Solid	Total BTEX	
890-2940-5	SW08	Total/NA	Solid	Total BTEX	
890-2940-6	SW09	Total/NA	Solid	Total BTEX	
890-2940-7	SW10	Total/NA	Solid	Total BTEX	
890-2940-8	SW11	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	8015NM Prep	
890-2940-2	SW05	Total/NA	Solid	8015NM Prep	
890-2940-3	SW06	Total/NA	Solid	8015NM Prep	
890-2940-4	SW07	Total/NA	Solid	8015NM Prep	
890-2940-5	SW08	Total/NA	Solid	8015NM Prep	
890-2940-6	SW09	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

GC Semi VOA (Continued)

Prep Batch: 34601 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-7	SW10	Total/NA	Solid	8015NM Prep	
890-2940-8	SW11	Total/NA	Solid	8015NM Prep	
MB 880-34601/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34601/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2940-1 MS	SW04	Total/NA	Solid	8015NM Prep	
890-2940-1 MSD	SW04	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	8015B NM	34601
890-2940-2	SW05	Total/NA	Solid	8015B NM	34601
890-2940-3	SW06	Total/NA	Solid	8015B NM	34601
890-2940-4	SW07	Total/NA	Solid	8015B NM	34601
890-2940-5	SW08	Total/NA	Solid	8015B NM	34601
890-2940-6	SW09	Total/NA	Solid	8015B NM	34601
890-2940-7	SW10	Total/NA	Solid	8015B NM	34601
890-2940-8	SW11	Total/NA	Solid	8015B NM	34601
MB 880-34601/1-A	Method Blank	Total/NA	Solid	8015B NM	34601
LCS 880-34601/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34601
LCSD 880-34601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34601
890-2940-1 MS	SW04	Total/NA	Solid	8015B NM	34601
890-2940-1 MSD	SW04	Total/NA	Solid	8015B NM	34601

Analysis Batch: 34837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Total/NA	Solid	8015 NM	
890-2940-2	SW05	Total/NA	Solid	8015 NM	
890-2940-3	SW06	Total/NA	Solid	8015 NM	
890-2940-4	SW07	Total/NA	Solid	8015 NM	
890-2940-5	SW08	Total/NA	Solid	8015 NM	
890-2940-6	SW09	Total/NA	Solid	8015 NM	
890-2940-7	SW10	Total/NA	Solid	8015 NM	
890-2940-8	SW11	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Soluble	Solid	DI Leach	
890-2940-2	SW05	Soluble	Solid	DI Leach	
890-2940-3	SW06	Soluble	Solid	DI Leach	
890-2940-4	SW07	Soluble	Solid	DI Leach	
890-2940-5	SW08	Soluble	Solid	DI Leach	
890-2940-6	SW09	Soluble	Solid	DI Leach	
890-2940-7	SW10	Soluble	Solid	DI Leach	
890-2940-8	SW11	Soluble	Solid	DI Leach	
MB 880-34507/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34507/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34507/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2940-3 MS	SW06	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

HPLC/IC (Continued)

Leach Batch: 34507 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-3 MSD	SW06	Soluble	Solid	DI Leach	

Analysis Batch: 34836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2940-1	SW04	Soluble	Solid	300.0	34507
890-2940-2	SW05	Soluble	Solid	300.0	34507
890-2940-3	SW06	Soluble	Solid	300.0	34507
890-2940-4	SW07	Soluble	Solid	300.0	34507
890-2940-5	SW08	Soluble	Solid	300.0	34507
890-2940-6	SW09	Soluble	Solid	300.0	34507
890-2940-7	SW10	Soluble	Solid	300.0	34507
890-2940-8	SW11	Soluble	Solid	300.0	34507
MB 880-34507/1-A	Method Blank	Soluble	Solid	300.0	34507
LCS 880-34507/2-A	Lab Control Sample	Soluble	Solid	300.0	34507
LCSD 880-34507/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34507
890-2940-3 MS	SW06	Soluble	Solid	300.0	34507
890-2940-3 MSD	SW06	Soluble	Solid	300.0	34507

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW04

Date Collected: 09/12/22 09:20
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2940-1
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			4.96 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 11:40	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 08:33	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:00	CH	EET MID

Client Sample ID: SW05

Date Collected: 09/12/22 09:30
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2940-2
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			5.03 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 12:02	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 09:43	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:04	CH	EET MID

Client Sample ID: SW06

Date Collected: 09/12/22 09:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2940-3
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			5.05 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 12:22	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 10:05	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:09	CH	EET MID

Client Sample ID: SW07

Date Collected: 09/12/22 09:50
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2940-4
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			5.00 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 12:43	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW07

Lab Sample ID: 890-2940-4
Matrix: Solid
Date Collected: 09/12/22 09:50
Date Received: 09/13/22 08:26

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			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 10:26	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:24	CH	EET MID

Client Sample ID: SW08

Lab Sample ID: 890-2940-5
Matrix: Solid
Date Collected: 09/12/22 10:10
Date Received: 09/13/22 08:26

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	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 13:04	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 10:48	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:29	CH	EET MID

Client Sample ID: SW09

Lab Sample ID: 890-2940-6
Matrix: Solid
Date Collected: 09/12/22 10:20
Date Received: 09/13/22 08:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 13:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 11:10	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 14:43	CH	EET MID

Client Sample ID: SW10

Lab Sample ID: 890-2940-7
Matrix: Solid
Date Collected: 09/12/22 10:30
Date Received: 09/13/22 08:26

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	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 13:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 11:31	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Client Sample ID: SW10

Lab Sample ID: 890-2940-7

Date Collected: 09/12/22 10:30
Matrix: Solid
Date Received: 09/13/22 08:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 14:48	CH	EET MID

Client Sample ID: SW11

Lab Sample ID: 890-2940-8

Date Collected: 09/12/22 14:30
Matrix: Solid
Date Received: 09/13/22 08:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 16:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35401	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34837	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 11:53	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:53	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 FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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

Method Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

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 FEDERAL 28 #011H

Job ID: 890-2940-1
SDG: 03A1987032

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2940-1	SW04	Solid	09/12/22 09:20	09/13/22 08:26	0 - 4
890-2940-2	SW05	Solid	09/12/22 09:30	09/13/22 08:26	0 - 3
890-2940-3	SW06	Solid	09/12/22 09:40	09/13/22 08:26	0 - 2
890-2940-4	SW07	Solid	09/12/22 09:50	09/13/22 08:26	0 - 2
890-2940-5	SW08	Solid	09/12/22 10:10	09/13/22 08:26	0 - 2
890-2940-6	SW09	Solid	09/12/22 10:20	09/13/22 08:26	0 - 4
890-2940-7	SW10	Solid	09/12/22 10:30	09/13/22 08:26	0 - 4
890-2940-8	SW11	Solid	09/12/22 14:30	09/13/22 08:26	0 - 4

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Chain of Custody

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

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, jlm.raley@dvn.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	
Project Number:	03A1987032	☑ Routine ☐ Rush	
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061174901		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

890-2940 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SW04	S	9.12.22	9:20	0-4'	Comp	1		X	X	X	
SW05	S	9.12.22	9:30	0-3'	Comp	1		X	X	X	
SW06	S	9.12.22	9:40	0-2'	Comp	1		X	X	X	Incident ID
SW07	S	9.12.22	9:50	0-2'	Comp	1		X	X	X	nAPP2215732821
SW08	S	9.12.22	10:10	0-2'	Comp	1		X	X	X	
SW09	S	9.12.22	10:20	0-4'	Comp	1		X	X	X	
SW10	S	9.12.22	10:30	0-4'	Comp	1		X	X	X	
SW11	S	9.12.22	14:30	0-4'	Comp	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 SiO_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9.13.22 824	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2940-1
SDG Number: 03A1987032

Login Number: 2940
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2940-1
SDG Number: 03A1987032

Login Number: 2940
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/14/22 11:07 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").	False	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2941-1
Laboratory Sample Delivery Group: 03A1987032
Client Project/Site: RDX FEDERAL 28 #011H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Devon Team

JKramer

Authorized for release by:
9/26/2022 11:48:59 AM

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

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

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

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Laboratory Job ID: 890-2941-1
SDG: 03A1987032

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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 FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Job ID: 890-2941-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2941-1

Receipt
The samples were received on 9/13/2022 8:26 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 1.6°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-35092/1-A) and (LCSD 880-35092/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-2940-A-1-E MS) and (890-2940-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-2941-1), BH01 (890-2941-2), BH02 (890-2941-3), BH02 (890-2941-4), BH03 (890-2941-5) and BH03 (890-2941-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH04 (890-2941-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-35092 and analytical batch 880-35226 recovered outside control limits for the following analytes: Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-35092 and analytical batch 880-35226. The associated laboratory control sample (LCS) met acceptance criteria.

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 surrogate recovery for the blank associated with preparation batch 880-34601 and analytical batch 880-34628 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-34601/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-34601 and analytical batch 880-34628 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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 FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH01

Lab Sample ID: 890-2941-1
Matrix: Solid
Date Collected: 09/12/22 10:40
Date Received: 09/13/22 08:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/21/22 15:19	09/23/22 16:32	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/21/22 15:19	09/23/22 16:32	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		09/21/22 15:19	09/23/22 16:32	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		09/21/22 15:19	09/23/22 16:32	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		09/21/22 15:19	09/23/22 16:32	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		09/21/22 15:19	09/23/22 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*155*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 16:32*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*09/21/22 15:19*	*09/23/22 16:32*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 12:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 12:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/15/22 15:04*	*09/16/22 12:14*	*1*
o-Terphenyl	*120*		*70 - 130*	*09/15/22 15:04*	*09/16/22 12:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.8**		5.03		mg/Kg			09/19/22 10:58	1

Client Sample ID: BH01

Lab Sample ID: 890-2941-2
Matrix: Solid
Date Collected: 09/12/22 10:50
Date Received: 09/13/22 08:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 16:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 16:53	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 16:53	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 16:53	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 16:53	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 16:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH01

Lab Sample ID: 890-2941-2
Matrix: Solid

Date Collected: 09/12/22 10:50
Date Received: 09/13/22 08:26
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*09/21/22 15:19*	*09/23/22 16:53*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.8		mg/Kg		09/15/22 15:04	09/16/22 12:36	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/22 15:04	09/16/22 12:36	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/22 15:04	09/16/22 12:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*94*		*70 - 130*	*09/15/22 15:04*	*09/16/22 12:36*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/15/22 15:04*	*09/16/22 12:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28.2**		5.01		mg/Kg			09/19/22 14:53	1

Client Sample ID: BH02

Lab Sample ID: 890-2941-3
Matrix: Solid

Date Collected: 09/12/22 11:00
Date Received: 09/13/22 08:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:14	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:14	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399		mg/Kg		09/21/22 15:19	09/23/22 17:14	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:14	1
Xylenes, Total	<0.00399	U *+	0.00399		mg/Kg		09/21/22 15:19	09/23/22 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*178*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 17:14*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*09/21/22 15:19*	*09/23/22 17:14*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH02

Date Collected: 09/12/22 11:00
Date Received: 09/13/22 08:26
Sample Depth: 0.5

Lab Sample ID: 890-2941-3
Matrix: Solid

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 13:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 13:48	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*09/15/22 15:04*	*09/16/22 13:48*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/15/22 15:04*	*09/16/22 13:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.3**		4.99		mg/Kg			09/19/22 11:07	1

Client Sample ID: BH02

Date Collected: 09/12/22 11:10
Date Received: 09/13/22 08:26
Sample Depth: 1

Lab Sample ID: 890-2941-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:34	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:34	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		09/21/22 15:19	09/23/22 17:34	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 17:34	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		09/21/22 15:19	09/23/22 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 17:34*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/21/22 15:19*	*09/23/22 17:34*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 14:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 14:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:13*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH02

Lab Sample ID: 890-2941-4
Matrix: Solid
Date Collected: 09/12/22 11:10
Date Received: 09/13/22 08:26
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.2		4.97		mg/Kg			09/19/22 11:12	1

Client Sample ID: BH03

Lab Sample ID: 890-2941-5
Matrix: Solid
Date Collected: 09/12/22 11:20
Date Received: 09/13/22 08:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 17:55	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 17:55	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 17:55	1
m-Xylene & p-Xylene	<0.00397	U *+	0.00397		mg/Kg		09/21/22 15:19	09/23/22 17:55	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 17:55	1
Xylenes, Total	<0.00397	U *+	0.00397		mg/Kg		09/21/22 15:19	09/23/22 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 17:55*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/21/22 15:19*	*09/23/22 17:55*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:34*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.6		5.01		mg/Kg			09/19/22 11:51	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH03

Lab Sample ID: 890-2941-6
Matrix: Solid
Date Collected: 09/12/22 11:30
Date Received: 09/13/22 08:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 18:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 18:16	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 18:16	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		09/21/22 15:19	09/23/22 18:16	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/21/22 15:19	09/23/22 18:16	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		09/21/22 15:19	09/23/22 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 18:16*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/21/22 15:19*	*09/23/22 18:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:04	09/16/22 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:56*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/15/22 15:04*	*09/16/22 14:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.5**		4.97		mg/Kg			09/19/22 12:06	1

Client Sample ID: BH04

Lab Sample ID: 890-2941-7
Matrix: Solid
Date Collected: 09/12/22 11:40
Date Received: 09/13/22 08:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 18:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 15:19	09/23/22 18:36	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 18:36	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 18:36	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		09/21/22 15:19	09/23/22 18:36	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		09/21/22 15:19	09/23/22 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*09/21/22 15:19*	*09/23/22 18:36*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH04

Lab Sample ID: 890-2941-7
Matrix: Solid
Date Collected: 09/12/22 11:40
Date Received: 09/13/22 08:26
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/21/22 15:19*	*09/23/22 18:36*	*1*

Method: 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			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*108*		*70 - 130*	*09/15/22 15:04*	*09/16/22 15:18*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/15/22 15:04*	*09/16/22 15:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.80**		4.99		mg/Kg			09/19/22 15:07	1

Client Sample ID: BH04

Lab Sample ID: 890-2941-8
Matrix: Solid
Date Collected: 09/12/22 11:50
Date Received: 09/13/22 08:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 18:57	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/21/22 15:19	09/23/22 18:57	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 18:57	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 18:57	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		09/21/22 15:19	09/23/22 18:57	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		09/21/22 15:19	09/23/22 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*09/21/22 15:19*	*09/23/22 18:57*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/21/22 15:19*	*09/23/22 18:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/26/22 12:34	1

Method: 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			09/19/22 12:57	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH04

Lab Sample ID: 890-2941-8
Matrix: Solid
Date Collected: 09/12/22 11:50
Date Received: 09/13/22 08:26
Sample Depth: 1

Method: 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 *1	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*09/15/22 15:04*	*09/16/22 15:39*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/15/22 15:04*	*09/16/22 15:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.52**		4.99		mg/Kg			09/19/22 12:16	1

Surrogate Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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)
890-2940-A-1-E MS	Matrix Spike	172 S1+	123
890-2940-A-1-F MSD	Matrix Spike Duplicate	173 S1+	142 S1+
890-2941-1	BH01	155 S1+	107
890-2941-2	BH01	175 S1+	114
890-2941-3	BH02	178 S1+	118
890-2941-4	BH02	159 S1+	95
890-2941-5	BH03	159 S1+	102
890-2941-6	BH03	141 S1+	89
890-2941-7	BH04	127	77
890-2941-8	BH04	162 S1+	98
LCS 880-35092/1-A	Lab Control Sample	138 S1+	126
LCSD 880-35092/2-A	Lab Control Sample Dup	166 S1+	136 S1+
MB 880-35092/5-A	Method Blank	121	113

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)
890-2940-A-1-C MS	Matrix Spike	90	85
890-2940-A-1-D MSD	Matrix Spike Duplicate	91	84
890-2941-1	BH01	108	120
890-2941-2	BH01	94	105
890-2941-3	BH02	95	103
890-2941-4	BH02	98	106
890-2941-5	BH03	108	116
890-2941-6	BH03	112	122
890-2941-7	BH04	108	118
890-2941-8	BH04	105	114
LCS 880-34601/2-A	Lab Control Sample	118	132 S1+
LCSD 880-34601/3-A	Lab Control Sample Dup	99	110
MB 880-34601/1-A	Method Blank	133 S1+	151 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35092/5-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 15:19	09/23/22 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 15:19	09/23/22 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:20*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*09/21/22 15:19*	*09/23/22 11:20*	*1*

Lab Sample ID: LCS 880-35092/1-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35092

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09803		mg/Kg		98	70 - 130		
Toluene			0.100	0.09879		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1144		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2610	*+	mg/Kg		131	70 - 130		
o-Xylene			0.100	0.1269		mg/Kg		127	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*

Lab Sample ID: LCSD 880-35092/2-A
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35092

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1127		mg/Kg		113	70 - 130	14	35
Toluene			0.100	0.1105		mg/Kg		110	70 - 130	11	35
Ethylbenzene			0.100	0.1355	*+	mg/Kg		136	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.3060	*+	mg/Kg		153	70 - 130	16	35
o-Xylene			0.100	0.1482	*+	mg/Kg		148	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*166*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*136*	*S1+*	*70 - 130*

Lab Sample ID: 890-2940-A-1-E MS
Matrix: Solid
Analysis Batch: 35226

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F2 F1	0.101	<0.00202	U F1	mg/Kg		0.8	70 - 130		
Toluene	<0.00202	U F2 F1	0.101	0.003123	F1	mg/Kg		3	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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

Lab Sample ID: 890-2940-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35226 — **Prep Batch: 35092**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U *+ F2 F1	0.101	0.003518	F1	mg/Kg		3	70 - 130
m-Xylene & p-Xylene	<0.00403	U *+ F2 F1	0.202	0.007024	F1	mg/Kg		3	70 - 130
o-Xylene	<0.00202	U *+ F2 F1	0.101	0.005178	F1	mg/Kg		5	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*172*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 890-2940-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35226 — **Prep Batch: 35092**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F2 F1	0.0996	0.02824	F2 F1	mg/Kg		28	70 - 130	188	35
Toluene	<0.00202	U F2 F1	0.0996	0.03493	F2 F1	mg/Kg		35	70 - 130	167	35
Ethylbenzene	<0.00202	U *+ F2 F1	0.0996	0.04667	F2 F1	mg/Kg		47	70 - 130	172	35
m-Xylene & p-Xylene	<0.00403	U *+ F2 F1	0.199	0.1134	F2 F1	mg/Kg		57	70 - 130	177	35
o-Xylene	<0.00202	U *+ F2 F1	0.0996	0.06160	F2 F1	mg/Kg		62	70 - 130	169	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*142*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-34601/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34628 — **Prep Batch: 34601**

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		09/15/22 15:04	09/16/22 07:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 07:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:04	09/16/22 07:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/15/22 15:04*	*09/16/22 07:29*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*09/15/22 15:04*	*09/16/22 07:29*	*1*

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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

Lab Sample ID: LCS 880-34601/2-A
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34601

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	988.0		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	909.1		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*132*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-34601/3-A
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34601

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	720.6	*1	mg/Kg		72	70 - 130	31	20
Diesel Range Organics (Over C10-C28)			1000	752.2		mg/Kg		75	70 - 130	19	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: 890-2940-A-1-C MS
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	996	866.0		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1008		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-2940-A-1-D MSD
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34601

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	<49.9	U *1	999	920.4		mg/Kg		90	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1015		mg/Kg		99	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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

Lab Sample ID: 890-2940-A-1-D MSD
Matrix: Solid
Analysis Batch: 34628

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34601

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34507/1-A
Matrix: Solid
Analysis Batch: 34836

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			09/19/22 08:46	1

Lab Sample ID: LCS 880-34507/2-A
Matrix: Solid
Analysis Batch: 34836

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.3		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-34507/3-A
Matrix: Solid
Analysis Batch: 34836

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	247.4		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2940-A-3-B MS
Matrix: Solid
Analysis Batch: 34836

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	20.5		251	271.7		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2940-A-3-C MSD
Matrix: Solid
Analysis Batch: 34836

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	20.5		251	271.8		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-34509/1-A
Matrix: Solid
Analysis Batch: 34844

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			09/19/22 11:37	1

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-34509/2-A
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-34509/3-A
Matrix: Solid
Analysis Batch: 34844

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	248.7		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2941-5 MS
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	40.6		251	288.2		mg/Kg		99	90 - 110		

Lab Sample ID: 890-2941-5 MSD
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	40.6		251	291.1		mg/Kg		100	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

GC VOA

Prep Batch: 35092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	5035	
890-2941-2	BH01	Total/NA	Solid	5035	
890-2941-3	BH02	Total/NA	Solid	5035	
890-2941-4	BH02	Total/NA	Solid	5035	
890-2941-5	BH03	Total/NA	Solid	5035	
890-2941-6	BH03	Total/NA	Solid	5035	
890-2941-7	BH04	Total/NA	Solid	5035	
890-2941-8	BH04	Total/NA	Solid	5035	
MB 880-35092/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35092/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35092/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2940-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2940-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 35226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	8021B	35092
890-2941-2	BH01	Total/NA	Solid	8021B	35092
890-2941-3	BH02	Total/NA	Solid	8021B	35092
890-2941-4	BH02	Total/NA	Solid	8021B	35092
890-2941-5	BH03	Total/NA	Solid	8021B	35092
890-2941-6	BH03	Total/NA	Solid	8021B	35092
890-2941-7	BH04	Total/NA	Solid	8021B	35092
890-2941-8	BH04	Total/NA	Solid	8021B	35092
MB 880-35092/5-A	Method Blank	Total/NA	Solid	8021B	35092
LCS 880-35092/1-A	Lab Control Sample	Total/NA	Solid	8021B	35092
LCSD 880-35092/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35092
890-2940-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	35092
890-2940-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	35092

Analysis Batch: 35403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	Total BTEX	
890-2941-2	BH01	Total/NA	Solid	Total BTEX	
890-2941-3	BH02	Total/NA	Solid	Total BTEX	
890-2941-4	BH02	Total/NA	Solid	Total BTEX	
890-2941-5	BH03	Total/NA	Solid	Total BTEX	
890-2941-6	BH03	Total/NA	Solid	Total BTEX	
890-2941-7	BH04	Total/NA	Solid	Total BTEX	
890-2941-8	BH04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	8015NM Prep	
890-2941-2	BH01	Total/NA	Solid	8015NM Prep	
890-2941-3	BH02	Total/NA	Solid	8015NM Prep	
890-2941-4	BH02	Total/NA	Solid	8015NM Prep	
890-2941-5	BH03	Total/NA	Solid	8015NM Prep	
890-2941-6	BH03	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

GC Semi VOA (Continued)

Prep Batch: 34601 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-7	BH04	Total/NA	Solid	8015NM Prep	
890-2941-8	BH04	Total/NA	Solid	8015NM Prep	
MB 880-34601/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34601/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2940-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2940-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	8015B NM	34601
890-2941-2	BH01	Total/NA	Solid	8015B NM	34601
890-2941-3	BH02	Total/NA	Solid	8015B NM	34601
890-2941-4	BH02	Total/NA	Solid	8015B NM	34601
890-2941-5	BH03	Total/NA	Solid	8015B NM	34601
890-2941-6	BH03	Total/NA	Solid	8015B NM	34601
890-2941-7	BH04	Total/NA	Solid	8015B NM	34601
890-2941-8	BH04	Total/NA	Solid	8015B NM	34601
MB 880-34601/1-A	Method Blank	Total/NA	Solid	8015B NM	34601
LCS 880-34601/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34601
LCSD 880-34601/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34601
890-2940-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34601
890-2940-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34601

Analysis Batch: 34838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Total/NA	Solid	8015 NM	
890-2941-2	BH01	Total/NA	Solid	8015 NM	
890-2941-3	BH02	Total/NA	Solid	8015 NM	
890-2941-4	BH02	Total/NA	Solid	8015 NM	
890-2941-5	BH03	Total/NA	Solid	8015 NM	
890-2941-6	BH03	Total/NA	Solid	8015 NM	
890-2941-7	BH04	Total/NA	Solid	8015 NM	
890-2941-8	BH04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Soluble	Solid	DI Leach	
890-2941-2	BH01	Soluble	Solid	DI Leach	
890-2941-3	BH02	Soluble	Solid	DI Leach	
890-2941-4	BH02	Soluble	Solid	DI Leach	
MB 880-34507/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34507/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34507/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2940-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2940-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

HPLC/IC

Leach Batch: 34509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-5	BH03	Soluble	Solid	DI Leach	
890-2941-6	BH03	Soluble	Solid	DI Leach	
890-2941-7	BH04	Soluble	Solid	DI Leach	
890-2941-8	BH04	Soluble	Solid	DI Leach	
MB 880-34509/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34509/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34509/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2941-5 MS	BH03	Soluble	Solid	DI Leach	
890-2941-5 MSD	BH03	Soluble	Solid	DI Leach	

Analysis Batch: 34836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-1	BH01	Soluble	Solid	300.0	34507
890-2941-2	BH01	Soluble	Solid	300.0	34507
890-2941-3	BH02	Soluble	Solid	300.0	34507
890-2941-4	BH02	Soluble	Solid	300.0	34507
MB 880-34507/1-A	Method Blank	Soluble	Solid	300.0	34507
LCS 880-34507/2-A	Lab Control Sample	Soluble	Solid	300.0	34507
LCSD 880-34507/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34507
890-2940-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	34507
890-2940-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34507

Analysis Batch: 34844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2941-5	BH03	Soluble	Solid	300.0	34509
890-2941-6	BH03	Soluble	Solid	300.0	34509
890-2941-7	BH04	Soluble	Solid	300.0	34509
890-2941-8	BH04	Soluble	Solid	300.0	34509
MB 880-34509/1-A	Method Blank	Soluble	Solid	300.0	34509
LCS 880-34509/2-A	Lab Control Sample	Soluble	Solid	300.0	34509
LCSD 880-34509/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34509
890-2941-5 MS	BH03	Soluble	Solid	300.0	34509
890-2941-5 MSD	BH03	Soluble	Solid	300.0	34509

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH01
Date Collected: 09/12/22 10:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-1
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			4.98 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 16:32	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 12:14	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 10:58	CH	EET MID

Client Sample ID: BH01
Date Collected: 09/12/22 10:50
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-2
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			5.03 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 16:53	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 12:36	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 14:53	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/12/22 11:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-3
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	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 17:14	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 13:48	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 11:07	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/12/22 11:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-4
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			4.99 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 17:34	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH02
Date Collected: 09/12/22 11:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-4
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			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 14:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34507	09/14/22 13:32	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34836	09/19/22 11:12	CH	EET MID

Client Sample ID: BH03
Date Collected: 09/12/22 11:20
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-5
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			5.04 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 17:55	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 14:34	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 11:51	CH	EET MID

Client Sample ID: BH03
Date Collected: 09/12/22 11:30
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-6
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			5.00 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 18:16	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 14:56	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:06	CH	EET MID

Client Sample ID: BH04
Date Collected: 09/12/22 11:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-7
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			5.02 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 18:36	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 15:18	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Client Sample ID: BH04
Date Collected: 09/12/22 11:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 15:07	CH	EET MID

Client Sample ID: BH04
Date Collected: 09/12/22 11:50
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2941-8
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			5.05 g	5 mL	35092	09/21/22 15:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35226	09/23/22 18:57	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35403	09/26/22 12:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			34838	09/19/22 12:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34601	09/15/22 15:04	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/16/22 15:39	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:16	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 FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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

Method Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

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 FEDERAL 28 #011H

Job ID: 890-2941-1
SDG: 03A1987032

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2941-1	BH01	Solid	09/12/22 10:40	09/13/22 08:26	0.5
890-2941-2	BH01	Solid	09/12/22 10:50	09/13/22 08:26	1
890-2941-3	BH02	Solid	09/12/22 11:00	09/13/22 08:26	0.5
890-2941-4	BH02	Solid	09/12/22 11:10	09/13/22 08:26	1
890-2941-5	BH03	Solid	09/12/22 11:20	09/13/22 08:26	0.5
890-2941-6	BH03	Solid	09/12/22 11:30	09/13/22 08:26	1
890-2941-7	BH04	Solid	09/12/22 11:40	09/13/22 08:26	0.5
890-2941-8	BH04	Solid	09/12/22 11:50	09/13/22 08:26	1

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Chain of Custody

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

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@dvn.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	
Project Number:	03A1987032	☑ Routine ☐ Rush	
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061174901		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TMM001	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
BH01	S	9.12.22	10:40	0.5'	Grab/	1	X	X	X
BH01	S	9.12.22	10:50	1'	Grab/	1	X	X	X
BH02	S	9.12.22	11:00	0.5'	Grab/	1	X	X	X
BH02	S	9.12.22	11:10	1'	Grab/	1	X	X	X
BH03	S	9.12.22	11:20	0.5'	Grab/	1	X	X	X
BH03	S	9.12.22	11:30	1'	Grab/	1	X	X	X
BH04	S	9.12.22	11:40	0.5'	Grab/	1	X	X	X
~~BH04~~	~~S~~	~~9.12.22~~	~~11:50~~	~~1'~~	~~Grab/~~	~~1~~	~~X~~	~~X~~	~~X~~

890-2941 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident ID
nAPP2215732821

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 Tl 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 Tl 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		9.13.22 8:26	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2941-1
SDG Number: 03A1987032

Login Number: 2941
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2941-1
SDG Number: 03A1987032

Login Number: 2941
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/14/22 11:07 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2942-1
Laboratory Sample Delivery Group: 03A1987032
Client Project/Site: RDX FEDERAL 28 #011H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Devon Team

JKramer

Authorized for release by:
9/26/2022 2:28:20 PM

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

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

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

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Laboratory Job ID: 890-2942-1
SDG: 03A1987032

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high 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 FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Job ID: 890-2942-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2942-1

Receipt
The samples were received on 9/13/2022 8:26 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 1.6°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35074 and analytical batch 880-35228 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.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-35074/1-A) and (LCSD 880-35074/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS09 (890-2942-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS20 (890-2942-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS24 (890-2942-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis 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: Surrogate recovery for the following sample was outside control limits: FS17 (890-2942-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS19 (890-2942-13) and FS20 (890-2942-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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 FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS07

Lab Sample ID: 890-2942-1
Matrix: Solid
Date Collected: 09/12/22 09:00
Date Received: 09/13/22 08:26
Sample Depth: 0900 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U F1	0.00201		mg/Kg		09/21/22 14:46	09/23/22 12:09	1
Toluene	<0.00201	U F1	0.00201		mg/Kg		09/21/22 14:46	09/23/22 12:09	1
Ethylbenzene	<0.00201	U F1	0.00201		mg/Kg		09/21/22 14:46	09/23/22 12:09	1
m-Xylene & p-Xylene	<0.00402	U F1	0.00402		mg/Kg		09/21/22 14:46	09/23/22 12:09	1
o-Xylene	<0.00201	U F1	0.00201		mg/Kg		09/21/22 14:46	09/23/22 12:09	1
Xylenes, Total	<0.00402	U F1	0.00402		mg/Kg		09/21/22 14:46	09/23/22 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/21/22 14:46*	*09/23/22 12:09*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/21/22 14:46*	*09/23/22 12:09*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 08:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 08:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 08:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*09/15/22 14:25*	*09/16/22 08:33*	*1*
o-Terphenyl	*96*		*70 - 130*	*09/15/22 14:25*	*09/16/22 08:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43.1**		5.00		mg/Kg			09/19/22 12:20	1

Client Sample ID: FS08

Lab Sample ID: 890-2942-2
Matrix: Solid
Date Collected: 09/12/22 09:10
Date Received: 09/13/22 08:26
Sample Depth: 0910 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 12:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 12:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 12:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 12:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 12:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*09/21/22 14:46*	*09/23/22 12:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS08

Lab Sample ID: 890-2942-2
Matrix: Solid
Date Collected: 09/12/22 09:10
Date Received: 09/13/22 08:26
Sample Depth: 0910 - 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/21/22 14:46*	*09/23/22 12:53*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 09:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 09:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 09:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/15/22 14:25*	*09/16/22 09:43*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/15/22 14:25*	*09/16/22 09:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.9**		5.02		mg/Kg			09/19/22 12:35	1

Client Sample ID: FS09

Lab Sample ID: 890-2942-3
Matrix: Solid
Date Collected: 09/12/22 10:00
Date Received: 09/13/22 08:26
Sample Depth: 1000 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 13:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 13:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 13:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 13:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 13:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*09/21/22 14:46*	*09/23/22 13:44*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/21/22 14:46*	*09/23/22 13:44*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS09

Lab Sample ID: 890-2942-3
Matrix: Solid
Date Collected: 09/12/22 10:00
Date Received: 09/13/22 08:26
Sample Depth: 1000 - 2

Method: 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		09/15/22 14:25	09/16/22 10:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 10:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 10:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:05*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.3**		5.03		mg/Kg			09/19/22 12:40	1

Client Sample ID: FS10

Lab Sample ID: 890-2942-4
Matrix: Solid
Date Collected: 09/12/22 12:00
Date Received: 09/13/22 08:26
Sample Depth: 1200 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 14:09	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 14:09	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 14:09	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/21/22 14:46	09/23/22 14:09	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 14:09	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/21/22 14:46	09/23/22 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/21/22 14:46*	*09/23/22 14:09*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/21/22 14:46*	*09/23/22 14:09*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 10:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 10:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 10:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:26*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS10

Lab Sample ID: 890-2942-4
Matrix: Solid
Date Collected: 09/12/22 12:00
Date Received: 09/13/22 08:26
Sample Depth: 1200 - 3

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.4		5.05		mg/Kg			09/19/22 12:45	1

Client Sample ID: FS11

Lab Sample ID: 890-2942-5
Matrix: Solid
Date Collected: 09/12/22 12:10
Date Received: 09/13/22 08:26
Sample Depth: 1210 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 14:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 14:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 14:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 14:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 14:35	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*09/21/22 14:46*	*09/23/22 14:35*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/21/22 14:46*	*09/23/22 14:35*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 10:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 10:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 10:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:48*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/15/22 14:25*	*09/16/22 10:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.0		5.01		mg/Kg			09/19/22 12:50	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS12

Lab Sample ID: 890-2942-6
Matrix: Solid
Date Collected: 09/12/22 12:20
Date Received: 09/13/22 08:26
Sample Depth: 1220 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 15:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 15:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 15:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 15:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 15:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:01*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:01*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 11:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 11:10	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 11:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:10*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29.9**		4.99		mg/Kg			09/19/22 12:54	1

Client Sample ID: FS13

Lab Sample ID: 890-2942-7
Matrix: Solid
Date Collected: 09/12/22 12:30
Date Received: 09/13/22 08:26
Sample Depth: 1230 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 15:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 15:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 15:27	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/21/22 14:46	09/23/22 15:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 15:27	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/21/22 14:46	09/23/22 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:27*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS13

Lab Sample ID: 890-2942-7
Matrix: Solid
Date Collected: 09/12/22 12:30
Date Received: 09/13/22 08:26
Sample Depth: 1230 - 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:27*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 11:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 11:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 11:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:31*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**845**		49.9		mg/Kg			09/19/22 13:00	10

Client Sample ID: FS14

Lab Sample ID: 890-2942-8
Matrix: Solid
Date Collected: 09/12/22 12:40
Date Received: 09/13/22 08:26
Sample Depth: 1240 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 15:53	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 15:53	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 15:53	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/21/22 14:46	09/23/22 15:53	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 15:53	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/21/22 14:46	09/23/22 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:53*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/21/22 14:46*	*09/23/22 15:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS14

Lab Sample ID: 890-2942-8
Matrix: Solid
Date Collected: 09/12/22 12:40
Date Received: 09/13/22 08:26
Sample Depth: 1240 - 3

Method: 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		09/15/22 14:25	09/16/22 11:53	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/22 14:25	09/16/22 11:53	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/22 14:25	09/16/22 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:53*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/15/22 14:25*	*09/16/22 11:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.8**		4.96		mg/Kg			09/19/22 13:14	1

Client Sample ID: FS15

Lab Sample ID: 890-2942-9
Matrix: Solid
Date Collected: 09/12/22 12:50
Date Received: 09/13/22 08:26
Sample Depth: 1250 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 16:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 16:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 16:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 16:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 16:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*09/21/22 14:46*	*09/23/22 16:19*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/21/22 14:46*	*09/23/22 16:19*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 12:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 12:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*09/15/22 14:25*	*09/16/22 12:14*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/15/22 14:25*	*09/16/22 12:14*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS15

Lab Sample ID: 890-2942-9
Matrix: Solid
Date Collected: 09/12/22 12:50
Date Received: 09/13/22 08:26
Sample Depth: 1250 - 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1420		49.5		mg/Kg			09/19/22 13:19	10

Client Sample ID: FS16

Lab Sample ID: 890-2942-10
Matrix: Solid
Date Collected: 09/12/22 13:00
Date Received: 09/13/22 08:26
Sample Depth: 1300 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 16:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 16:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 16:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 16:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 16:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/21/22 14:46*	*09/23/22 16:44*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/21/22 14:46*	*09/23/22 16:44*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 12:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 12:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 12:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*09/15/22 14:25*	*09/16/22 12:36*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/15/22 14:25*	*09/16/22 12:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	158		4.95		mg/Kg			09/19/22 13:34	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS17

Lab Sample ID: 890-2942-11
Matrix: Solid
Date Collected: 09/12/22 13:10
Date Received: 09/13/22 08:26
Sample Depth: 1310 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 18:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 18:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 18:29	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 18:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 18:29	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*09/21/22 14:46*	*09/23/22 18:29*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/21/22 14:46*	*09/23/22 18:29*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 13:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 13:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*09/15/22 14:25*	*09/16/22 13:48*	*1*
o-Terphenyl	*130*		*70 - 130*	*09/15/22 14:25*	*09/16/22 13:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31.2**		5.03		mg/Kg			09/19/22 13:39	1

Client Sample ID: FS18

Lab Sample ID: 890-2942-12
Matrix: Solid
Date Collected: 09/12/22 13:20
Date Received: 09/13/22 08:26
Sample Depth: 1320 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 18:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 18:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 18:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 18:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 18:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/21/22 14:46*	*09/23/22 18:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS18

Lab Sample ID: 890-2942-12
Matrix: Solid
Date Collected: 09/12/22 13:20
Date Received: 09/13/22 08:26
Sample Depth: 1320 - 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*09/21/22 14:46*	*09/23/22 18:55*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 14:13	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 14:13	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*09/15/22 14:25*	*09/16/22 14:13*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/15/22 14:25*	*09/16/22 14:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**179**		4.97		mg/Kg			09/19/22 13:43	1

Client Sample ID: FS19

Lab Sample ID: 890-2942-13
Matrix: Solid
Date Collected: 09/12/22 13:30
Date Received: 09/13/22 08:26
Sample Depth: 1330 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 19:21	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 19:21	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 19:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/21/22 14:46	09/23/22 19:21	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/21/22 14:46	09/23/22 19:21	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/21/22 14:46	09/23/22 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/21/22 14:46*	*09/23/22 19:21*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/21/22 14:46*	*09/23/22 19:21*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS19

Lab Sample ID: 890-2942-13
Matrix: Solid
Date Collected: 09/12/22 13:30
Date Received: 09/13/22 08:26
Sample Depth: 1330 - 4

Method: 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		09/15/22 14:25	09/16/22 14:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 14:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/15/22 14:25*	*09/16/22 14:34*	*1*
o-Terphenyl	*128*		*70 - 130*	*09/15/22 14:25*	*09/16/22 14:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3730**		99.6		mg/Kg			09/19/22 13:48	20

Client Sample ID: FS20

Lab Sample ID: 890-2942-14
Matrix: Solid
Date Collected: 09/12/22 13:40
Date Received: 09/13/22 08:26
Sample Depth: 1340 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 19:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 19:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 19:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/21/22 14:46	09/23/22 19:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 19:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/21/22 14:46	09/23/22 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/21/22 14:46*	*09/23/22 19:47*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*09/21/22 14:46*	*09/23/22 19:47*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 14:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 14:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*09/15/22 14:25*	*09/16/22 14:56*	*1*
o-Terphenyl	*126*		*70 - 130*	*09/15/22 14:25*	*09/16/22 14:56*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS20

Lab Sample ID: 890-2942-14
Matrix: Solid
Date Collected: 09/12/22 13:40
Date Received: 09/13/22 08:26
Sample Depth: 1340 - 3

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.7		5.00		mg/Kg			09/19/22 13:53	1

Client Sample ID: FS21

Lab Sample ID: 890-2942-15
Matrix: Solid
Date Collected: 09/12/22 13:50
Date Received: 09/13/22 08:26
Sample Depth: 1350 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 20:13	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 20:13	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 20:13	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/21/22 14:46	09/23/22 20:13	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/21/22 14:46	09/23/22 20:13	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/21/22 14:46	09/23/22 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/21/22 14:46*	*09/23/22 20:13*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/21/22 14:46*	*09/23/22 20:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 15:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 15:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/15/22 14:25*	*09/16/22 15:18*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/15/22 14:25*	*09/16/22 15:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.8		5.00		mg/Kg			09/19/22 13:58	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS22

Lab Sample ID: 890-2942-16
Matrix: Solid
Date Collected: 09/12/22 14:00
Date Received: 09/13/22 08:26
Sample Depth: 1400 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 20:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 20:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 20:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 20:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 20:38	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/21/22 14:46	09/23/22 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/21/22 14:46*	*09/23/22 20:38*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*09/21/22 14:46*	*09/23/22 20:38*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 15:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/22 14:25	09/16/22 15:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/22 14:25	09/16/22 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*09/15/22 14:25*	*09/16/22 15:39*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/15/22 14:25*	*09/16/22 15:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.2**		5.04		mg/Kg			09/19/22 14:03	1

Client Sample ID: FS23

Lab Sample ID: 890-2942-17
Matrix: Solid
Date Collected: 09/12/22 14:10
Date Received: 09/13/22 08:26
Sample Depth: 1410 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:04	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:04	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 21:04	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:04	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/21/22 14:46*	*09/23/22 21:04*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS23

Lab Sample ID: 890-2942-17
Matrix: Solid
Date Collected: 09/12/22 14:10
Date Received: 09/13/22 08:26
Sample Depth: 1410 - 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/21/22 14:46*	*09/23/22 21:04*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Method: 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		09/15/22 14:25	09/16/22 16:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 16:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*09/15/22 14:25*	*09/16/22 16:01*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/15/22 14:25*	*09/16/22 16:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.8**		5.01		mg/Kg			09/19/22 11:11	1

Client Sample ID: FS24

Lab Sample ID: 890-2942-18
Matrix: Solid
Date Collected: 09/12/22 14:20
Date Received: 09/13/22 08:26
Sample Depth: 1420 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 21:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/22 14:46	09/23/22 21:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/22 14:46	09/23/22 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*09/21/22 14:46*	*09/23/22 21:30*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*09/21/22 14:46*	*09/23/22 21:30*	*1*

Method: 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			09/23/22 17:25	1

Method: 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			09/19/22 11:13	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS24

Date Collected: 09/12/22 14:20
Date Received: 09/13/22 08:26
Sample Depth: 1420 - 3

Lab Sample ID: 890-2942-18

Matrix: Solid

Method: 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		09/15/22 14:25	09/16/22 16:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 16:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 14:25	09/16/22 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*09/15/22 14:25*	*09/16/22 16:22*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/15/22 14:25*	*09/16/22 16:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**121**		5.05		mg/Kg			09/19/22 11:34	1

Surrogate Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

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)
890-2942-1	FS07	115	74
890-2942-1 MS	FS07	110	74
890-2942-1 MSD	FS07	120	77
890-2942-2	FS08	119	76
890-2942-3	FS09	141 S1+	82
890-2942-4	FS10	115	79
890-2942-5	FS11	95	72
890-2942-6	FS12	116	89
890-2942-7	FS13	127	73
890-2942-8	FS14	90	81
890-2942-9	FS15	127	82
890-2942-10	FS16	107	75
890-2942-11	FS17	124	74
890-2942-12	FS18	94	111
890-2942-13	FS19	116	74
890-2942-14	FS20	102	65 S1-
890-2942-15	FS21	116	75
890-2942-16	FS22	105	70
890-2942-17	FS23	115	75
890-2942-18	FS24	95	67 S1-
LCS 880-35074/1-A	Lab Control Sample	109	64 S1-
LCSD 880-35074/2-A	Lab Control Sample Dup	131 S1+	79
MB 880-35074/5-A	Method Blank	93	76

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)
890-2942-1	FS07	101	96
890-2942-1 MS	FS07	101	96
890-2942-1 MSD	FS07	105	85
890-2942-2	FS08	109	105
890-2942-3	FS09	115	110
890-2942-4	FS10	107	102
890-2942-5	FS11	117	109
890-2942-6	FS12	128	118
890-2942-7	FS13	114	109
890-2942-8	FS14	112	109
890-2942-9	FS15	114	111
890-2942-10	FS16	112	109
890-2942-11	FS17	137 S1+	130
890-2942-12	FS18	117	117
890-2942-13	FS19	133 S1+	128
890-2942-14	FS20	137 S1+	126

Surrogate Summary

Client: Ensolum Job ID: 890-2942-1
Project/Site: RDX FEDERAL 28 #011H SDG: 03A1987032

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
890-2942-15	FS21	104	101								
890-2942-16	FS22	112	110								
890-2942-17	FS23	110	111								
890-2942-18	FS24	116	118								
LCS 880-34596/2-A	Lab Control Sample	109	93								
LCSD 880-34596/3-A	Lab Control Sample Dup	102	96								
MB 880-34596/1-A	Method Blank	115	110								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35074/5-A
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 11:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 11:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/22 14:46	09/23/22 11:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/22 14:46	09/23/22 11:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/22 14:46	09/23/22 11:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/21/22 14:46*	*09/23/22 11:43*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/21/22 14:46*	*09/23/22 11:43*	*1*

Lab Sample ID: LCS 880-35074/1-A
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35074

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07093		mg/Kg		71	70 - 130		
Toluene			0.100	0.08035		mg/Kg		80	70 - 130		
Ethylbenzene			0.100	0.07541		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene			0.200	0.1518		mg/Kg		76	70 - 130		
o-Xylene			0.100	0.07510		mg/Kg		75	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-35074/2-A
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35074

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09722		mg/Kg		97	70 - 130	31	35
Toluene			0.100	0.09378		mg/Kg		94	70 - 130	15	35
Ethylbenzene			0.100	0.09269		mg/Kg		93	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.1887		mg/Kg		94	70 - 130	22	35
o-Xylene			0.100	0.09312		mg/Kg		93	70 - 130	21	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 890-2942-1 MS
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: FS07
Prep Type: Total/NA
Prep Batch: 35074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.100	0.02522	F1	mg/Kg		25	70 - 130		
Toluene	<0.00201	U F1	0.100	0.02432	F1	mg/Kg		24	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

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

Lab Sample ID: 890-2942-1 MS
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: FS07
Prep Type: Total/NA
Prep Batch: 35074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.100	0.02588	F1	mg/Kg		26	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.05207	F1	mg/Kg		26	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.02747	F1	mg/Kg		27	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

Lab Sample ID: 890-2942-1 MSD
Matrix: Solid
Analysis Batch: 35228

Client Sample ID: FS07
Prep Type: Total/NA
Prep Batch: 35074

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0998	0.02569	F1	mg/Kg		26	70 - 130	2	35
Toluene	<0.00201	U F1	0.0998	0.02507	F1	mg/Kg		25	70 - 130	3	35
Ethylbenzene	<0.00201	U F1	0.0998	0.02505	F1	mg/Kg		25	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.05019	F1	mg/Kg		25	70 - 130	4	35
o-Xylene	<0.00201	U F1	0.0998	0.02817	F1	mg/Kg		28	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*

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

Lab Sample ID: MB 880-34596/1-A
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34596

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		09/15/22 14:25	09/16/22 07:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 07:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 14:25	09/16/22 07:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*09/15/22 14:25*	*09/16/22 07:29*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/15/22 14:25*	*09/16/22 07:29*	*1*

Lab Sample ID: LCS 880-34596/2-A
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34596

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1038		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1000	831.5		mg/Kg		83	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

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

Lab Sample ID: LCS 880-34596/2-A
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34596

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: LCSD 880-34596/3-A
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34596

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	987.7		mg/Kg		99	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	860.7		mg/Kg		86	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-2942-1 MS
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: FS07
Prep Type: Total/NA
Prep Batch: 34596

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	877.7		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1165		mg/Kg		112	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-2942-1 MSD
Matrix: Solid
Analysis Batch: 34626

Client Sample ID: FS07
Prep Type: Total/NA
Prep Batch: 34596

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	<49.9	U	999	784.3		mg/Kg		79	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1029		mg/Kg		99	70 - 130	12	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34509/1-A
Matrix: Solid
Analysis Batch: 34844

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			09/19/22 11:37	1

Lab Sample ID: LCS 880-34509/2-A
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	248.0		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-34509/3-A
Matrix: Solid
Analysis Batch: 34844

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	248.7		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2942-7 MS
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: FS13
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	845		2500	3301		mg/Kg		98	90 - 110

Lab Sample ID: 890-2942-7 MSD
Matrix: Solid
Analysis Batch: 34844

Client Sample ID: FS13
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	845		2500	3299		mg/Kg		98	90 - 110	0	20

Lab Sample ID: MB 880-34584/1-A
Matrix: Solid
Analysis Batch: 34849

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			09/19/22 10:49	1

Lab Sample ID: LCS 880-34584/2-A
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.5		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-34584/3-A
Matrix: Solid
Analysis Batch: 34849

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	251.2		mg/Kg		100	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-2942-17 MS
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: FS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.8		251	268.1		mg/Kg		95	90 - 110		

Lab Sample ID: 890-2942-17 MSD
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: FS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	30.8		251	270.0		mg/Kg		96	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

GC VOA

Prep Batch: 35074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	5035	
890-2942-2	FS08	Total/NA	Solid	5035	
890-2942-3	FS09	Total/NA	Solid	5035	
890-2942-4	FS10	Total/NA	Solid	5035	
890-2942-5	FS11	Total/NA	Solid	5035	
890-2942-6	FS12	Total/NA	Solid	5035	
890-2942-7	FS13	Total/NA	Solid	5035	
890-2942-8	FS14	Total/NA	Solid	5035	
890-2942-9	FS15	Total/NA	Solid	5035	
890-2942-10	FS16	Total/NA	Solid	5035	
890-2942-11	FS17	Total/NA	Solid	5035	
890-2942-12	FS18	Total/NA	Solid	5035	
890-2942-13	FS19	Total/NA	Solid	5035	
890-2942-14	FS20	Total/NA	Solid	5035	
890-2942-15	FS21	Total/NA	Solid	5035	
890-2942-16	FS22	Total/NA	Solid	5035	
890-2942-17	FS23	Total/NA	Solid	5035	
890-2942-18	FS24	Total/NA	Solid	5035	
MB 880-35074/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35074/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35074/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2942-1 MS	FS07	Total/NA	Solid	5035	
890-2942-1 MSD	FS07	Total/NA	Solid	5035	

Analysis Batch: 35228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	8021B	35074
890-2942-2	FS08	Total/NA	Solid	8021B	35074
890-2942-3	FS09	Total/NA	Solid	8021B	35074
890-2942-4	FS10	Total/NA	Solid	8021B	35074
890-2942-5	FS11	Total/NA	Solid	8021B	35074
890-2942-6	FS12	Total/NA	Solid	8021B	35074
890-2942-7	FS13	Total/NA	Solid	8021B	35074
890-2942-8	FS14	Total/NA	Solid	8021B	35074
890-2942-9	FS15	Total/NA	Solid	8021B	35074
890-2942-10	FS16	Total/NA	Solid	8021B	35074
890-2942-11	FS17	Total/NA	Solid	8021B	35074
890-2942-12	FS18	Total/NA	Solid	8021B	35074
890-2942-13	FS19	Total/NA	Solid	8021B	35074
890-2942-14	FS20	Total/NA	Solid	8021B	35074
890-2942-15	FS21	Total/NA	Solid	8021B	35074
890-2942-16	FS22	Total/NA	Solid	8021B	35074
890-2942-17	FS23	Total/NA	Solid	8021B	35074
890-2942-18	FS24	Total/NA	Solid	8021B	35074
MB 880-35074/5-A	Method Blank	Total/NA	Solid	8021B	35074
LCS 880-35074/1-A	Lab Control Sample	Total/NA	Solid	8021B	35074
LCSD 880-35074/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35074
890-2942-1 MS	FS07	Total/NA	Solid	8021B	35074
890-2942-1 MSD	FS07	Total/NA	Solid	8021B	35074

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

GC VOA

Analysis Batch: 35310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	Total BTEX	
890-2942-2	FS08	Total/NA	Solid	Total BTEX	
890-2942-3	FS09	Total/NA	Solid	Total BTEX	
890-2942-4	FS10	Total/NA	Solid	Total BTEX	
890-2942-5	FS11	Total/NA	Solid	Total BTEX	
890-2942-6	FS12	Total/NA	Solid	Total BTEX	
890-2942-7	FS13	Total/NA	Solid	Total BTEX	
890-2942-8	FS14	Total/NA	Solid	Total BTEX	
890-2942-9	FS15	Total/NA	Solid	Total BTEX	
890-2942-10	FS16	Total/NA	Solid	Total BTEX	
890-2942-11	FS17	Total/NA	Solid	Total BTEX	
890-2942-12	FS18	Total/NA	Solid	Total BTEX	
890-2942-13	FS19	Total/NA	Solid	Total BTEX	
890-2942-14	FS20	Total/NA	Solid	Total BTEX	
890-2942-15	FS21	Total/NA	Solid	Total BTEX	
890-2942-16	FS22	Total/NA	Solid	Total BTEX	
890-2942-17	FS23	Total/NA	Solid	Total BTEX	
890-2942-18	FS24	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	8015NM Prep	
890-2942-2	FS08	Total/NA	Solid	8015NM Prep	
890-2942-3	FS09	Total/NA	Solid	8015NM Prep	
890-2942-4	FS10	Total/NA	Solid	8015NM Prep	
890-2942-5	FS11	Total/NA	Solid	8015NM Prep	
890-2942-6	FS12	Total/NA	Solid	8015NM Prep	
890-2942-7	FS13	Total/NA	Solid	8015NM Prep	
890-2942-8	FS14	Total/NA	Solid	8015NM Prep	
890-2942-9	FS15	Total/NA	Solid	8015NM Prep	
890-2942-10	FS16	Total/NA	Solid	8015NM Prep	
890-2942-11	FS17	Total/NA	Solid	8015NM Prep	
890-2942-12	FS18	Total/NA	Solid	8015NM Prep	
890-2942-13	FS19	Total/NA	Solid	8015NM Prep	
890-2942-14	FS20	Total/NA	Solid	8015NM Prep	
890-2942-15	FS21	Total/NA	Solid	8015NM Prep	
890-2942-16	FS22	Total/NA	Solid	8015NM Prep	
890-2942-17	FS23	Total/NA	Solid	8015NM Prep	
890-2942-18	FS24	Total/NA	Solid	8015NM Prep	
MB 880-34596/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34596/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34596/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2942-1 MS	FS07	Total/NA	Solid	8015NM Prep	
890-2942-1 MSD	FS07	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	8015B NM	34596
890-2942-2	FS08	Total/NA	Solid	8015B NM	34596

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

GC Semi VOA (Continued)

Analysis Batch: 34626 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-3	FS09	Total/NA	Solid	8015B NM	34596
890-2942-4	FS10	Total/NA	Solid	8015B NM	34596
890-2942-5	FS11	Total/NA	Solid	8015B NM	34596
890-2942-6	FS12	Total/NA	Solid	8015B NM	34596
890-2942-7	FS13	Total/NA	Solid	8015B NM	34596
890-2942-8	FS14	Total/NA	Solid	8015B NM	34596
890-2942-9	FS15	Total/NA	Solid	8015B NM	34596
890-2942-10	FS16	Total/NA	Solid	8015B NM	34596
890-2942-11	FS17	Total/NA	Solid	8015B NM	34596
890-2942-12	FS18	Total/NA	Solid	8015B NM	34596
890-2942-13	FS19	Total/NA	Solid	8015B NM	34596
890-2942-14	FS20	Total/NA	Solid	8015B NM	34596
890-2942-15	FS21	Total/NA	Solid	8015B NM	34596
890-2942-16	FS22	Total/NA	Solid	8015B NM	34596
890-2942-17	FS23	Total/NA	Solid	8015B NM	34596
890-2942-18	FS24	Total/NA	Solid	8015B NM	34596
MB 880-34596/1-A	Method Blank	Total/NA	Solid	8015B NM	34596
LCS 880-34596/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34596
LCSD 880-34596/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34596
890-2942-1 MS	FS07	Total/NA	Solid	8015B NM	34596
890-2942-1 MSD	FS07	Total/NA	Solid	8015B NM	34596

Analysis Batch: 34820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Total/NA	Solid	8015 NM	
890-2942-2	FS08	Total/NA	Solid	8015 NM	
890-2942-3	FS09	Total/NA	Solid	8015 NM	
890-2942-4	FS10	Total/NA	Solid	8015 NM	
890-2942-5	FS11	Total/NA	Solid	8015 NM	
890-2942-6	FS12	Total/NA	Solid	8015 NM	
890-2942-7	FS13	Total/NA	Solid	8015 NM	
890-2942-8	FS14	Total/NA	Solid	8015 NM	
890-2942-9	FS15	Total/NA	Solid	8015 NM	
890-2942-10	FS16	Total/NA	Solid	8015 NM	
890-2942-11	FS17	Total/NA	Solid	8015 NM	
890-2942-12	FS18	Total/NA	Solid	8015 NM	
890-2942-13	FS19	Total/NA	Solid	8015 NM	
890-2942-14	FS20	Total/NA	Solid	8015 NM	
890-2942-15	FS21	Total/NA	Solid	8015 NM	
890-2942-16	FS22	Total/NA	Solid	8015 NM	
890-2942-17	FS23	Total/NA	Solid	8015 NM	
890-2942-18	FS24	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Soluble	Solid	DI Leach	
890-2942-2	FS08	Soluble	Solid	DI Leach	
890-2942-3	FS09	Soluble	Solid	DI Leach	
890-2942-4	FS10	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

HPLC/IC (Continued)

Leach Batch: 34509 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-5	FS11	Soluble	Solid	DI Leach	
890-2942-6	FS12	Soluble	Solid	DI Leach	
890-2942-7	FS13	Soluble	Solid	DI Leach	
890-2942-8	FS14	Soluble	Solid	DI Leach	
890-2942-9	FS15	Soluble	Solid	DI Leach	
890-2942-10	FS16	Soluble	Solid	DI Leach	
890-2942-11	FS17	Soluble	Solid	DI Leach	
890-2942-12	FS18	Soluble	Solid	DI Leach	
890-2942-13	FS19	Soluble	Solid	DI Leach	
890-2942-14	FS20	Soluble	Solid	DI Leach	
890-2942-15	FS21	Soluble	Solid	DI Leach	
890-2942-16	FS22	Soluble	Solid	DI Leach	
MB 880-34509/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34509/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34509/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2942-7 MS	FS13	Soluble	Solid	DI Leach	
890-2942-7 MSD	FS13	Soluble	Solid	DI Leach	

Leach Batch: 34584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-17	FS23	Soluble	Solid	DI Leach	
890-2942-18	FS24	Soluble	Solid	DI Leach	
MB 880-34584/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34584/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34584/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2942-17 MS	FS23	Soluble	Solid	DI Leach	
890-2942-17 MSD	FS23	Soluble	Solid	DI Leach	

Analysis Batch: 34844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-1	FS07	Soluble	Solid	300.0	34509
890-2942-2	FS08	Soluble	Solid	300.0	34509
890-2942-3	FS09	Soluble	Solid	300.0	34509
890-2942-4	FS10	Soluble	Solid	300.0	34509
890-2942-5	FS11	Soluble	Solid	300.0	34509
890-2942-6	FS12	Soluble	Solid	300.0	34509
890-2942-7	FS13	Soluble	Solid	300.0	34509
890-2942-8	FS14	Soluble	Solid	300.0	34509
890-2942-9	FS15	Soluble	Solid	300.0	34509
890-2942-10	FS16	Soluble	Solid	300.0	34509
890-2942-11	FS17	Soluble	Solid	300.0	34509
890-2942-12	FS18	Soluble	Solid	300.0	34509
890-2942-13	FS19	Soluble	Solid	300.0	34509
890-2942-14	FS20	Soluble	Solid	300.0	34509
890-2942-15	FS21	Soluble	Solid	300.0	34509
890-2942-16	FS22	Soluble	Solid	300.0	34509
MB 880-34509/1-A	Method Blank	Soluble	Solid	300.0	34509
LCS 880-34509/2-A	Lab Control Sample	Soluble	Solid	300.0	34509
LCSD 880-34509/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34509
890-2942-7 MS	FS13	Soluble	Solid	300.0	34509
890-2942-7 MSD	FS13	Soluble	Solid	300.0	34509

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

HPLC/IC

Analysis Batch: 34849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2942-17	FS23	Soluble	Solid	300.0	34584
890-2942-18	FS24	Soluble	Solid	300.0	34584
MB 880-34584/1-A	Method Blank	Soluble	Solid	300.0	34584
LCS 880-34584/2-A	Lab Control Sample	Soluble	Solid	300.0	34584
LCSD 880-34584/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34584
890-2942-17 MS	FS23	Soluble	Solid	300.0	34584
890-2942-17 MSD	FS23	Soluble	Solid	300.0	34584

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS07
Date Collected: 09/12/22 09:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-1
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 12:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 08:33	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:20	CH	EET MID

Client Sample ID: FS08
Date Collected: 09/12/22 09:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-2
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			5.01 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 12:53	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 09:43	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:35	CH	EET MID

Client Sample ID: FS09
Date Collected: 09/12/22 10:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-3
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			5.02 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 13:44	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 10:05	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:40	CH	EET MID

Client Sample ID: FS10
Date Collected: 09/12/22 12:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-4
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			4.97 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 14:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS10
Date Collected: 09/12/22 12:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-4
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			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 10:26	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:45	CH	EET MID

Client Sample ID: FS11
Date Collected: 09/12/22 12:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-5
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			5.01 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 14:35	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 10:48	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:50	CH	EET MID

Client Sample ID: FS12
Date Collected: 09/12/22 12:20
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-6
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			5.03 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 15:01	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 11:10	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 12:54	CH	EET MID

Client Sample ID: FS13
Date Collected: 09/12/22 12:30
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-7
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 15:27	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 11:31	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS13

Date Collected: 09/12/22 12:30
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		10			34844	09/19/22 13:00	CH	EET MID

Client Sample ID: FS14

Date Collected: 09/12/22 12:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-8
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			4.95 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 15:53	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 11:53	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:14	CH	EET MID

Client Sample ID: FS15

Date Collected: 09/12/22 12:50
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-9
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 16:19	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 12:14	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		10			34844	09/19/22 13:19	CH	EET MID

Client Sample ID: FS16

Date Collected: 09/12/22 13:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-10
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 16:44	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 12:36	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:34	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS17
Date Collected: 09/12/22 13:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-11
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 18:29	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 13:48	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:39	CH	EET MID

Client Sample ID: FS18
Date Collected: 09/12/22 13:20
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-12
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 18:55	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 14:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:43	CH	EET MID

Client Sample ID: FS19
Date Collected: 09/12/22 13:30
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-13
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 19:21	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 14:34	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		20			34844	09/19/22 13:48	CH	EET MID

Client Sample ID: FS20
Date Collected: 09/12/22 13:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-14
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 19:47	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS20
Date Collected: 09/12/22 13:40
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-14
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			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 14:56	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:53	CH	EET MID

Client Sample ID: FS21
Date Collected: 09/12/22 13:50
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-15
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			4.95 g	5 mL	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 20:13	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 15:18	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 13:58	CH	EET MID

Client Sample ID: FS22
Date Collected: 09/12/22 14:00
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-16
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 20:38	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 15:39	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34509	09/14/22 13:35	SMC	EET MID
Soluble	Analysis	300.0		1			34844	09/19/22 14:03	CH	EET MID

Client Sample ID: FS23
Date Collected: 09/12/22 14:10
Date Received: 09/13/22 08:26

Lab Sample ID: 890-2942-17
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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 21:04	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 16:01	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Client Sample ID: FS23

Lab Sample ID: 890-2942-17

Date Collected: 09/12/22 14:10
Matrix: Solid
Date Received: 09/13/22 08:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 11:11	CH	EET MID

Client Sample ID: FS24

Lab Sample ID: 890-2942-18

Date Collected: 09/12/22 14:20
Matrix: Solid
Date Received: 09/13/22 08:26

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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 21:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35310	09/23/22 17:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			34820	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34596	09/15/22 14:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/16/22 16:22	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 11:34	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 FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

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

Method Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

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 FEDERAL 28 #011H

Job ID: 890-2942-1
SDG: 03A1987032

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2942-1	FS07	Solid	09/12/22 09:00	09/13/22 08:26	0900 - 2
890-2942-2	FS08	Solid	09/12/22 09:10	09/13/22 08:26	0910 - 2
890-2942-3	FS09	Solid	09/12/22 10:00	09/13/22 08:26	1000 - 2
890-2942-4	FS10	Solid	09/12/22 12:00	09/13/22 08:26	1200 - 3
890-2942-5	FS11	Solid	09/12/22 12:10	09/13/22 08:26	1210 - 4
890-2942-6	FS12	Solid	09/12/22 12:20	09/13/22 08:26	1220 - 3
890-2942-7	FS13	Solid	09/12/22 12:30	09/13/22 08:26	1230 - 4
890-2942-8	FS14	Solid	09/12/22 12:40	09/13/22 08:26	1240 - 3
890-2942-9	FS15	Solid	09/12/22 12:50	09/13/22 08:26	1250 - 4
890-2942-10	FS16	Solid	09/12/22 13:00	09/13/22 08:26	1300 - 2
890-2942-11	FS17	Solid	09/12/22 13:10	09/13/22 08:26	1310 - 3
890-2942-12	FS18	Solid	09/12/22 13:20	09/13/22 08:26	1320 - 4
890-2942-13	FS19	Solid	09/12/22 13:30	09/13/22 08:26	1330 - 4
890-2942-14	FS20	Solid	09/12/22 13:40	09/13/22 08:26	1340 - 3
890-2942-15	FS21	Solid	09/12/22 13:50	09/13/22 08:26	1350 - 3
890-2942-16	FS22	Solid	09/12/22 14:00	09/13/22 08:26	1400 - 3
890-2942-17	FS23	Solid	09/12/22 14:10	09/13/22 08:26	1410 - 3
890-2942-18	FS24	Solid	09/12/22 14:20	09/13/22 08:26	1420 - 3

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

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 ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	
Project Number:	03A1987032	☑ Routine ☐ Rush	
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061174901		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	Thermo 207	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS07	S	9.12.22	9:00	2'	Comp	1		X	X	X	
FS08	S	9.12.22	9:10	2'	Comp	1		X	X	X	
FS09	S	9.12.22	10:00	2'	Comp	1		X	X	X	Incident ID
FS10	S	9.12.22	12:00	3'	Comp	1		X	X	X	nAPP2215732821
FS11	S	9.12.22	12:10	4'	Comp	1		X	X	X	
FS12	S	9.12.22	12:20	3'	Comp	1		X	X	X	
FS13	S	9.12.22	12:30	4'	Comp	1		X	X	X	
FS14	S	9.12.22	12:40	3'	Comp	1		X	X	X	
FS15	S	9.12.22	12:50	4'	Comp	1		X	X	X	
FS16	S	9.12.22	13:00	2'	Comp	1		X	X	X	

890-2942 Chain of Custody

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 Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9.13.22 8	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020 2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

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 ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	
Project Number:	03A1987032	☑ Routine ☐ Rush	
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061174901		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	Parameters: TPH (8015)	Parameters: BTEX (8021)	Sample Comments
FS17	S	9.12.22	13:10	3'	Comp	1		X	X	X	
FS18	S	9.12.22	13:20	4'	Comp	1		X	X	X	
FS19	S	9.12.22	13:30	4'	Comp	1		X	X	X	Incident ID
FS20	S	9.12.22	13:40	3'	Comp	1		X	X	X	nAPP2215732821
FS21	S	9.12.22	13:50	3'	Comp	1		X	X	X	
FS22	S	9.12.22	14:00	3'	Comp	1		X	X	X	
FS23	S	9.12.22	14:10	3'	Comp	1		X	X	X	
FS24	S	9.12.22	14:20	3'	Comp	1		X	X	X	

ANALYSIS REQUEST

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 Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4.13.22 8:26			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2942-1
SDG Number: 03A1987032

Login Number: 2942
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2942-1
SDG Number: 03A1987032

Login Number: 2942
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/14/22 11:07 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2949-1
Laboratory Sample Delivery Group: 03A1987032
Client Project/Site: RDX FEDERAL 28 #011H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Devon Team

JKramer

Authorized for release by:
9/26/2022 3:28:29 PM

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

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

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

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Laboratory Job ID: 890-2949-1
SDG: 03A1987032

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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
F1	MS and/or MSD recovery exceeds control limits.
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 FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Job ID: 890-2949-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2949-1

Receipt
The samples were received on 9/13/2022 3:26 PM. 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 7.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35197 and analytical batch 880-35328 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.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-34600 and analytical batch 880-34707 contained Gasoline Range Organics (GRO)-C6-C10 and OII Range Organics (Over C28-C36) 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 for preparation batch 880-34600 and analytical batch 880-34707 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34584 and analytical batch 880-34849 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 FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH05

Lab Sample ID: 890-2949-1
Matrix: Solid
Date Collected: 09/13/22 10:00
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U F2 F1	0.00198		mg/Kg		09/22/22 15:32	09/24/22 15:41	1
Toluene	<0.00198	U F1	0.00198		mg/Kg		09/22/22 15:32	09/24/22 15:41	1
Ethylbenzene	<0.00198	U F2 F1	0.00198		mg/Kg		09/22/22 15:32	09/24/22 15:41	1
m-Xylene & p-Xylene	<0.00396	U F2 F1	0.00396		mg/Kg		09/22/22 15:32	09/24/22 15:41	1
o-Xylene	<0.00198	U F2 F1	0.00198		mg/Kg		09/22/22 15:32	09/24/22 15:41	1
Xylenes, Total	<0.00396	U F2 F1	0.00396		mg/Kg		09/22/22 15:32	09/24/22 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*09/22/22 15:32*	*09/24/22 15:41*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/22/22 15:32*	*09/24/22 15:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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 F1	49.9		mg/Kg		09/15/22 15:00	09/17/22 21:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 21:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*09/15/22 15:00*	*09/17/22 21:07*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/15/22 15:00*	*09/17/22 21:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26.1**		5.03		mg/Kg			09/19/22 11:49	1

Client Sample ID: BH05

Lab Sample ID: 890-2949-2
Matrix: Solid
Date Collected: 09/13/22 10:10
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 16:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 16:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 16:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 16:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 16:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:01*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH05

Lab Sample ID: 890-2949-2
Matrix: Solid

Date Collected: 09/13/22 10:10
Date Received: 09/13/22 15:26
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:01*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/17/22 22:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 22:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*93*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:12*	*1*
o-Terphenyl	*96*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**144**		4.99		mg/Kg			09/19/22 11:56	1

Client Sample ID: BH06

Lab Sample ID: 890-2949-3
Matrix: Solid

Date Collected: 09/13/22 10:20
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 16:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:22*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:22*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH06

Date Collected: 09/13/22 10:20
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Lab Sample ID: 890-2949-3
Matrix: Solid

Method: 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		09/15/22 15:00	09/17/22 22:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 22:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:34*	*1*
o-Terphenyl	*118*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2380**		49.6		mg/Kg			09/19/22 13:21	10

Client Sample ID: BH06

Date Collected: 09/13/22 10:30
Date Received: 09/13/22 15:26
Sample Depth: 1

Lab Sample ID: 890-2949-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 16:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 16:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:43*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*09/22/22 15:32*	*09/24/22 16:43*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/17/22 22:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 22:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:55*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/15/22 15:00*	*09/17/22 22:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH06

Lab Sample ID: 890-2949-4
Matrix: Solid
Date Collected: 09/13/22 10:30
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1940		49.5		mg/Kg			09/19/22 13:30	10

Client Sample ID: BH07

Lab Sample ID: 890-2949-5
Matrix: Solid
Date Collected: 09/13/22 10:40
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 17:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:03	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:03*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:03*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/17/22 23:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 23:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*09/15/22 15:00*	*09/17/22 23:17*	*1*
o-Terphenyl	*129*		*70 - 130*	*09/15/22 15:00*	*09/17/22 23:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1940		49.6		mg/Kg			09/19/22 13:38	10

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH07

Lab Sample ID: 890-2949-6
Matrix: Solid
Date Collected: 09/13/22 10:50
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 17:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 17:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 17:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 17:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 17:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:24*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:24*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/17/22 23:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 23:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/17/22 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/15/22 15:00*	*09/17/22 23:39*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/15/22 15:00*	*09/17/22 23:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1750**		50.5		mg/Kg			09/19/22 13:47	10

Client Sample ID: BH08

Lab Sample ID: 890-2949-7
Matrix: Solid
Date Collected: 09/13/22 11:00
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/22/22 15:32	09/24/22 17:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 17:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/22/22 15:32	09/24/22 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:45*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH08

Lab Sample ID: 890-2949-7
Matrix: Solid
Date Collected: 09/13/22 11:00
Date Received: 09/13/22 15:26
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/22/22 15:32*	*09/24/22 17:45*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 00:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 00:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:00*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1310**		123		mg/Kg			09/19/22 13:55	10

Client Sample ID: BH08

Lab Sample ID: 890-2949-8
Matrix: Solid
Date Collected: 09/13/22 11:10
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:05*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:05*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH08

Lab Sample ID: 890-2949-8
Matrix: Solid
Date Collected: 09/13/22 11:10
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 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		09/15/22 15:00	09/18/22 00:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 00:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:21*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**668**	**F1**	50.1		mg/Kg			09/19/22 14:04	10

Client Sample ID: BH09

Lab Sample ID: 890-2949-9
Matrix: Solid
Date Collected: 09/13/22 11:20
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:26*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:26*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 00:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/22 15:00	09/18/22 00:42	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/22 15:00	09/18/22 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:42*	*1*
o-Terphenyl	*112*		*70 - 130*	*09/15/22 15:00*	*09/18/22 00:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH09
Date Collected: 09/13/22 11:20
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Lab Sample ID: 890-2949-9
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1390		50.1		mg/Kg			09/19/22 14:29	10

Client Sample ID: BH09
Date Collected: 09/13/22 11:30
Date Received: 09/13/22 15:26
Sample Depth: 1

Lab Sample ID: 890-2949-10
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/22/22 15:32	09/24/22 18:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/22/22 15:32	09/24/22 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:46*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*09/22/22 15:32*	*09/24/22 18:46*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 01:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 01:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/15/22 15:00*	*09/18/22 01:03*	*1*
o-Terphenyl	*95*		*70 - 130*	*09/15/22 15:00*	*09/18/22 01:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1050		49.6		mg/Kg			09/19/22 14:37	10

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH10

Lab Sample ID: 890-2949-11
Matrix: Solid
Date Collected: 09/13/22 11:40
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 20:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:10	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:10*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:10*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 01:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 01:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*09/15/22 15:00*	*09/18/22 01:46*	*1*
o-Terphenyl	*100*		*70 - 130*	*09/15/22 15:00*	*09/18/22 01:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.0**		4.98		mg/Kg			09/19/22 15:03	1

Client Sample ID: BH10

Lab Sample ID: 890-2949-12
Matrix: Solid
Date Collected: 09/13/22 11:50
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 20:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 20:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 20:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 20:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/22/22 15:32	09/24/22 20:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/22/22 15:32	09/24/22 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH10

Lab Sample ID: 890-2949-12
Matrix: Solid

Date Collected: 09/13/22 11:50
Date Received: 09/13/22 15:26
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:31*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 02:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 02:07	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*111*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:07*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.3**		4.99		mg/Kg			09/19/22 15:11	1

Client Sample ID: BH11

Lab Sample ID: 890-2949-13
Matrix: Solid

Date Collected: 09/13/22 12:00
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 20:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 20:51	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/22/22 15:32	09/24/22 20:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:51*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/22/22 15:32*	*09/24/22 20:51*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

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Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH11

Lab Sample ID: 890-2949-13
Matrix: Solid
Date Collected: 09/13/22 12:00
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 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		09/15/22 15:00	09/18/22 02:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 02:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:28*	*1*
o-Terphenyl	*125*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19.3**		5.00		mg/Kg			09/19/22 17:32	1

Client Sample ID: BH11

Lab Sample ID: 890-2949-14
Matrix: Solid
Date Collected: 09/13/22 12:10
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/22/22 15:32	09/24/22 21:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/22/22 15:32	09/24/22 21:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/22/22 15:32	09/24/22 21:12	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/22/22 15:32	09/24/22 21:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/22/22 15:32	09/24/22 21:12	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/22/22 15:32	09/24/22 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/22/22 15:32*	*09/24/22 21:12*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/22/22 15:32*	*09/24/22 21:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 02:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 02:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/15/22 15:00	09/18/22 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:49*	*1*
o-Terphenyl	*126*		*70 - 130*	*09/15/22 15:00*	*09/18/22 02:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH11

Lab Sample ID: 890-2949-14
Matrix: Solid
Date Collected: 09/13/22 12:10
Date Received: 09/13/22 15:26
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.1		5.00		mg/Kg			09/19/22 17:40	1

Client Sample ID: BH12

Lab Sample ID: 890-2949-15
Matrix: Solid
Date Collected: 09/13/22 12:20
Date Received: 09/13/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/25/22 12:23	09/26/22 13:02	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/25/22 12:23	09/26/22 13:02	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/25/22 12:23	09/26/22 13:02	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/25/22 12:23	09/26/22 13:02	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/25/22 12:23	09/26/22 13:02	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/25/22 12:23	09/26/22 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/25/22 12:23*	*09/26/22 13:02*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*09/25/22 12:23*	*09/26/22 13:02*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 03:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/22 15:00	09/18/22 03:10	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/22 15:00	09/18/22 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/15/22 15:00*	*09/18/22 03:10*	*1*
o-Terphenyl	*126*		*70 - 130*	*09/15/22 15:00*	*09/18/22 03:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142		4.96		mg/Kg			09/19/22 17:49	1

Client Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH12

Date Collected: 09/13/22 12:30
Date Received: 09/13/22 15:26
Sample Depth: 1

Lab Sample ID: 890-2949-16

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 21:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 21:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 21:53	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/22/22 15:32	09/24/22 21:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 21:53	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/22/22 15:32	09/24/22 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/22/22 15:32*	*09/24/22 21:53*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/22/22 15:32*	*09/24/22 21:53*	*1*

Method: 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			09/26/22 15:33	1

Method: 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			09/19/22 14:17	1

Method: 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		09/15/22 15:00	09/18/22 03:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 03:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/18/22 03:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*09/15/22 15:00*	*09/18/22 03:31*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/15/22 15:00*	*09/18/22 03:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**139**		4.97		mg/Kg			09/19/22 17:57	1

Surrogate Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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)
890-2949-1	BH05	99	82
890-2949-1 MS	BH05	117	107
890-2949-1 MSD	BH05	89	83
890-2949-2	BH05	106	71
890-2949-3	BH06	118	98
890-2949-4	BH06	115	90
890-2949-5	BH07	93	86
890-2949-6	BH07	115	86
890-2949-7	BH08	85	82
890-2949-8	BH08	101	78
890-2949-9	BH09	89	83
890-2949-10	BH09	91	84
890-2949-11	BH10	93	87
890-2949-12	BH10	102	78
890-2949-13	BH11	115	95
890-2949-14	BH11	113	81
890-2949-15	BH12	105	106
890-2949-16	BH12	93	83
890-2953-A-53-D MS	Matrix Spike	87	109
890-2953-A-53-E MSD	Matrix Spike Duplicate	90	111
LCS 880-35197/1-A	Lab Control Sample	117	106
LCS 880-35335/1-A	Lab Control Sample	81	106
LCSD 880-35197/2-A	Lab Control Sample Dup	105	104
LCSD 880-35335/2-A	Lab Control Sample Dup	82	110
MB 880-35197/5-A	Method Blank	96	91
MB 880-35335/5-A	Method Blank	104	114

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)
890-2949-1	BH05	91	94
890-2949-1 MS	BH05	78	73
890-2949-1 MSD	BH05	85	81
890-2949-2	BH05	93	96
890-2949-3	BH06	114	118
890-2949-4	BH06	92	94
890-2949-5	BH07	126	129
890-2949-6	BH07	104	107
890-2949-7	BH08	100	103
890-2949-8	BH08	115	119
890-2949-9	BH09	110	112
890-2949-10	BH09	94	95
890-2949-11	BH10	97	100

Surrogate Summary

Client: Ensolum Job ID: 890-2949-1
Project/Site: RDX FEDERAL 28 #011H SDG: 03A1987032

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
890-2949-12	BH10	111	116								
890-2949-13	BH11	121	125								
890-2949-14	BH11	122	126								
890-2949-15	BH12	123	126								
890-2949-16	BH12	121	122								
LCS 880-34600/2-A	Lab Control Sample	100	104								
LCSD 880-34600/3-A	Lab Control Sample Dup	99	102								
MB 880-34600/1-A	Method Blank	119	125								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35197/5-A
Matrix: Solid
Analysis Batch: 35328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35197

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 15:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 15:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 15:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/22/22 15:32	09/24/22 15:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/22 15:32	09/24/22 15:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/22/22 15:32	09/24/22 15:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/22/22 15:32*	*09/24/22 15:19*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/22/22 15:32*	*09/24/22 15:19*	*1*

Lab Sample ID: LCS 880-35197/1-A
Matrix: Solid
Analysis Batch: 35328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35197

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08242		mg/Kg		82	70 - 130		
Toluene			0.100	0.07705		mg/Kg		77	70 - 130		
Ethylbenzene			0.100	0.08171		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1683		mg/Kg		84	70 - 130		
o-Xylene			0.100	0.09663		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-35197/2-A
Matrix: Solid
Analysis Batch: 35328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35197

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07974		mg/Kg		80	70 - 130	3	35
Toluene			0.100	0.07317		mg/Kg		73	70 - 130	5	35
Ethylbenzene			0.100	0.07553		mg/Kg		76	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1539		mg/Kg		77	70 - 130	9	35
o-Xylene			0.100	0.08789		mg/Kg		88	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-2949-1 MS
Matrix: Solid
Analysis Batch: 35328

Client Sample ID: BH05
Prep Type: Total/NA
Prep Batch: 35197

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U F2 F1	0.0990	0.06775	F1	mg/Kg		68	70 - 130		
Toluene	<0.00198	U F1	0.0990	0.06032	F1	mg/Kg		61	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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

Lab Sample ID: 890-2949-1 MS — **Client Sample ID: BH05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35328 — **Prep Batch: 35197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U F2 F1	0.0990	0.06275	F1	mg/Kg		63	70 - 130
m-Xylene & p-Xylene	<0.00396	U F2 F1	0.198	0.1277	F1	mg/Kg		65	70 - 130
o-Xylene	<0.00198	U F2 F1	0.0990	0.07392		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-2949-1 MSD — **Client Sample ID: BH05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35328 — **Prep Batch: 35197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F2 F1	0.101	0.03199	F2 F1	mg/Kg		32	70 - 130	72	35
Toluene	<0.00198	U F1	0.101	0.04472	F1	mg/Kg		44	70 - 130	30	35
Ethylbenzene	<0.00198	U F2 F1	0.101	0.04344	F2 F1	mg/Kg		43	70 - 130	36	35
m-Xylene & p-Xylene	<0.00396	U F2 F1	0.201	0.08232	F2 F1	mg/Kg		41	70 - 130	43	35
o-Xylene	<0.00198	U F2 F1	0.101	0.04732	F2 F1	mg/Kg		47	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: MB 880-35335/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35348 — **Prep Batch: 35335**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/25/22 12:23	09/26/22 11:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/25/22 12:23	09/26/22 11:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/25/22 12:23	09/26/22 11:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/25/22 12:23	09/26/22 11:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/25/22 12:23	09/26/22 11:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/25/22 12:23	09/26/22 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/25/22 12:23*	*09/26/22 11:52*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*09/25/22 12:23*	*09/26/22 11:52*	*1*

Lab Sample ID: LCS 880-35335/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35348 — **Prep Batch: 35335**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1061		mg/Kg		106	70 - 130
Toluene	0.100	0.08108		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.08013		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	0.200	0.1640		mg/Kg		82	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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

Lab Sample ID: LCS 880-35335/1-A
Matrix: Solid
Analysis Batch: 35348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35335

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.08017		mg/Kg		80	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-35335/2-A
Matrix: Solid
Analysis Batch: 35348

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35335

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1107		mg/Kg		111	70 - 130	4	35
Toluene			0.100	0.08514		mg/Kg		85	70 - 130	5	35
Ethylbenzene			0.100	0.08106		mg/Kg		81	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1650		mg/Kg		83	70 - 130	1	35
o-Xylene			0.100	0.08115		mg/Kg		81	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-2953-A-53-D MS
Matrix: Solid
Analysis Batch: 35348

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35335

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09826		mg/Kg		98	70 - 130		
Toluene	<0.00198	U	0.0998	0.07700		mg/Kg		77	70 - 130		
Ethylbenzene	<0.00198	U	0.0998	0.07393		mg/Kg		73	70 - 130		
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1519		mg/Kg		76	70 - 130		
o-Xylene	<0.00198	U	0.0998	0.07740		mg/Kg		77	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-2953-A-53-E MSD
Matrix: Solid
Analysis Batch: 35348

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35335

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.101	0.1007		mg/Kg		100	70 - 130	2	35
Toluene	<0.00198	U	0.101	0.08148		mg/Kg		80	70 - 130	6	35
Ethylbenzene	<0.00198	U	0.101	0.07809		mg/Kg		77	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.202	0.1613		mg/Kg		79	70 - 130	6	35
o-Xylene	<0.00198	U	0.101	0.08219		mg/Kg		81	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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

Lab Sample ID: 890-2953-A-53-E MSD
Matrix: Solid
Analysis Batch: 35348

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35335

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

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

Lab Sample ID: MB 880-34600/1-A
Matrix: Solid
Analysis Batch: 34707

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34600

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		09/15/22 15:00	09/17/22 20:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 20:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/22 15:00	09/17/22 20:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	09/15/22 15:00	09/17/22 20:03	1
o-Terphenyl	125		70 - 130	09/15/22 15:00	09/17/22 20:03	1

Lab Sample ID: LCS 880-34600/2-A
Matrix: Solid
Analysis Batch: 34707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34600

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	827.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	927.5		mg/Kg		93	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-34600/3-A
Matrix: Solid
Analysis Batch: 34707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34600

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	883.3		mg/Kg		88	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	921.9		mg/Kg		92	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	102		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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

Lab Sample ID: 890-2949-1 MS
Matrix: Solid
Analysis Batch: 34707

Client Sample ID: BH05
Prep Type: Total/NA
Prep Batch: 34600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	996	494.2	F1	mg/Kg		48	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	758.4		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*
o-Terphenyl	*73*		*70 - 130*

Lab Sample ID: 890-2949-1 MSD
Matrix: Solid
Analysis Batch: 34707

Client Sample ID: BH05
Prep Type: Total/NA
Prep Batch: 34600

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	<49.9	U F1	999	549.9	F1	mg/Kg		53	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	844.1		mg/Kg		84	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34584/1-A
Matrix: Solid
Analysis Batch: 34849

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			09/19/22 10:49	1

Lab Sample ID: LCS 880-34584/2-A
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.5		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-34584/3-A
Matrix: Solid
Analysis Batch: 34849

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	251.2		mg/Kg		100	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2949-8 MS
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: BH08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	668	F1	2510	3291		mg/Kg		105	90 - 110

Lab Sample ID: 890-2949-8 MSD
Matrix: Solid
Analysis Batch: 34849

Client Sample ID: BH08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	668	F1	2510	3585	F1	mg/Kg		116	90 - 110	9	20

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

GC VOA

Prep Batch: 35197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	5035	
890-2949-2	BH05	Total/NA	Solid	5035	
890-2949-3	BH06	Total/NA	Solid	5035	
890-2949-4	BH06	Total/NA	Solid	5035	
890-2949-5	BH07	Total/NA	Solid	5035	
890-2949-6	BH07	Total/NA	Solid	5035	
890-2949-7	BH08	Total/NA	Solid	5035	
890-2949-8	BH08	Total/NA	Solid	5035	
890-2949-9	BH09	Total/NA	Solid	5035	
890-2949-10	BH09	Total/NA	Solid	5035	
890-2949-11	BH10	Total/NA	Solid	5035	
890-2949-12	BH10	Total/NA	Solid	5035	
890-2949-13	BH11	Total/NA	Solid	5035	
890-2949-14	BH11	Total/NA	Solid	5035	
890-2949-16	BH12	Total/NA	Solid	5035	
MB 880-35197/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35197/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35197/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2949-1 MS	BH05	Total/NA	Solid	5035	
890-2949-1 MSD	BH05	Total/NA	Solid	5035	

Analysis Batch: 35328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	8021B	35197
890-2949-2	BH05	Total/NA	Solid	8021B	35197
890-2949-3	BH06	Total/NA	Solid	8021B	35197
890-2949-4	BH06	Total/NA	Solid	8021B	35197
890-2949-5	BH07	Total/NA	Solid	8021B	35197
890-2949-6	BH07	Total/NA	Solid	8021B	35197
890-2949-7	BH08	Total/NA	Solid	8021B	35197
890-2949-8	BH08	Total/NA	Solid	8021B	35197
890-2949-9	BH09	Total/NA	Solid	8021B	35197
890-2949-10	BH09	Total/NA	Solid	8021B	35197
890-2949-11	BH10	Total/NA	Solid	8021B	35197
890-2949-12	BH10	Total/NA	Solid	8021B	35197
890-2949-13	BH11	Total/NA	Solid	8021B	35197
890-2949-14	BH11	Total/NA	Solid	8021B	35197
890-2949-16	BH12	Total/NA	Solid	8021B	35197
MB 880-35197/5-A	Method Blank	Total/NA	Solid	8021B	35197
LCS 880-35197/1-A	Lab Control Sample	Total/NA	Solid	8021B	35197
LCSD 880-35197/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35197
890-2949-1 MS	BH05	Total/NA	Solid	8021B	35197
890-2949-1 MSD	BH05	Total/NA	Solid	8021B	35197

Prep Batch: 35335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-15	BH12	Total/NA	Solid	5035	
MB 880-35335/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35335/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35335/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2953-A-53-D MS	Matrix Spike	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

GC VOA (Continued)

Prep Batch: 35335 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2953-A-53-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 35348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-15	BH12	Total/NA	Solid	8021B	35335
MB 880-35335/5-A	Method Blank	Total/NA	Solid	8021B	35335
LCS 880-35335/1-A	Lab Control Sample	Total/NA	Solid	8021B	35335
LCSD 880-35335/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35335
890-2953-A-53-D MS	Matrix Spike	Total/NA	Solid	8021B	35335
890-2953-A-53-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	35335

Analysis Batch: 35424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	Total BTEX	
890-2949-2	BH05	Total/NA	Solid	Total BTEX	
890-2949-3	BH06	Total/NA	Solid	Total BTEX	
890-2949-4	BH06	Total/NA	Solid	Total BTEX	
890-2949-5	BH07	Total/NA	Solid	Total BTEX	
890-2949-6	BH07	Total/NA	Solid	Total BTEX	
890-2949-7	BH08	Total/NA	Solid	Total BTEX	
890-2949-8	BH08	Total/NA	Solid	Total BTEX	
890-2949-9	BH09	Total/NA	Solid	Total BTEX	
890-2949-10	BH09	Total/NA	Solid	Total BTEX	
890-2949-11	BH10	Total/NA	Solid	Total BTEX	
890-2949-12	BH10	Total/NA	Solid	Total BTEX	
890-2949-13	BH11	Total/NA	Solid	Total BTEX	
890-2949-14	BH11	Total/NA	Solid	Total BTEX	
890-2949-15	BH12	Total/NA	Solid	Total BTEX	
890-2949-16	BH12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 34600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	8015NM Prep	
890-2949-2	BH05	Total/NA	Solid	8015NM Prep	
890-2949-3	BH06	Total/NA	Solid	8015NM Prep	
890-2949-4	BH06	Total/NA	Solid	8015NM Prep	
890-2949-5	BH07	Total/NA	Solid	8015NM Prep	
890-2949-6	BH07	Total/NA	Solid	8015NM Prep	
890-2949-7	BH08	Total/NA	Solid	8015NM Prep	
890-2949-8	BH08	Total/NA	Solid	8015NM Prep	
890-2949-9	BH09	Total/NA	Solid	8015NM Prep	
890-2949-10	BH09	Total/NA	Solid	8015NM Prep	
890-2949-11	BH10	Total/NA	Solid	8015NM Prep	
890-2949-12	BH10	Total/NA	Solid	8015NM Prep	
890-2949-13	BH11	Total/NA	Solid	8015NM Prep	
890-2949-14	BH11	Total/NA	Solid	8015NM Prep	
890-2949-15	BH12	Total/NA	Solid	8015NM Prep	
890-2949-16	BH12	Total/NA	Solid	8015NM Prep	
MB 880-34600/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

GC Semi VOA (Continued)

Prep Batch: 34600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-34600/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34600/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2949-1 MS	BH05	Total/NA	Solid	8015NM Prep	
890-2949-1 MSD	BH05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	8015B NM	34600
890-2949-2	BH05	Total/NA	Solid	8015B NM	34600
890-2949-3	BH06	Total/NA	Solid	8015B NM	34600
890-2949-4	BH06	Total/NA	Solid	8015B NM	34600
890-2949-5	BH07	Total/NA	Solid	8015B NM	34600
890-2949-6	BH07	Total/NA	Solid	8015B NM	34600
890-2949-7	BH08	Total/NA	Solid	8015B NM	34600
890-2949-8	BH08	Total/NA	Solid	8015B NM	34600
890-2949-9	BH09	Total/NA	Solid	8015B NM	34600
890-2949-10	BH09	Total/NA	Solid	8015B NM	34600
890-2949-11	BH10	Total/NA	Solid	8015B NM	34600
890-2949-12	BH10	Total/NA	Solid	8015B NM	34600
890-2949-13	BH11	Total/NA	Solid	8015B NM	34600
890-2949-14	BH11	Total/NA	Solid	8015B NM	34600
890-2949-15	BH12	Total/NA	Solid	8015B NM	34600
890-2949-16	BH12	Total/NA	Solid	8015B NM	34600
MB 880-34600/1-A	Method Blank	Total/NA	Solid	8015B NM	34600
LCS 880-34600/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34600
LCSD 880-34600/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34600
890-2949-1 MS	BH05	Total/NA	Solid	8015B NM	34600
890-2949-1 MSD	BH05	Total/NA	Solid	8015B NM	34600

Analysis Batch: 34845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Total/NA	Solid	8015 NM	
890-2949-2	BH05	Total/NA	Solid	8015 NM	
890-2949-3	BH06	Total/NA	Solid	8015 NM	
890-2949-4	BH06	Total/NA	Solid	8015 NM	
890-2949-5	BH07	Total/NA	Solid	8015 NM	
890-2949-6	BH07	Total/NA	Solid	8015 NM	
890-2949-7	BH08	Total/NA	Solid	8015 NM	
890-2949-8	BH08	Total/NA	Solid	8015 NM	
890-2949-9	BH09	Total/NA	Solid	8015 NM	
890-2949-10	BH09	Total/NA	Solid	8015 NM	
890-2949-11	BH10	Total/NA	Solid	8015 NM	
890-2949-12	BH10	Total/NA	Solid	8015 NM	
890-2949-13	BH11	Total/NA	Solid	8015 NM	
890-2949-14	BH11	Total/NA	Solid	8015 NM	
890-2949-15	BH12	Total/NA	Solid	8015 NM	
890-2949-16	BH12	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

HPLC/IC

Leach Batch: 34584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Soluble	Solid	DI Leach	
890-2949-2	BH05	Soluble	Solid	DI Leach	
890-2949-3	BH06	Soluble	Solid	DI Leach	
890-2949-4	BH06	Soluble	Solid	DI Leach	
890-2949-5	BH07	Soluble	Solid	DI Leach	
890-2949-6	BH07	Soluble	Solid	DI Leach	
890-2949-7	BH08	Soluble	Solid	DI Leach	
890-2949-8	BH08	Soluble	Solid	DI Leach	
890-2949-9	BH09	Soluble	Solid	DI Leach	
890-2949-10	BH09	Soluble	Solid	DI Leach	
890-2949-11	BH10	Soluble	Solid	DI Leach	
890-2949-12	BH10	Soluble	Solid	DI Leach	
890-2949-13	BH11	Soluble	Solid	DI Leach	
890-2949-14	BH11	Soluble	Solid	DI Leach	
890-2949-15	BH12	Soluble	Solid	DI Leach	
890-2949-16	BH12	Soluble	Solid	DI Leach	
MB 880-34584/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34584/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34584/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2949-8 MS	BH08	Soluble	Solid	DI Leach	
890-2949-8 MSD	BH08	Soluble	Solid	DI Leach	

Analysis Batch: 34849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2949-1	BH05	Soluble	Solid	300.0	34584
890-2949-2	BH05	Soluble	Solid	300.0	34584
890-2949-3	BH06	Soluble	Solid	300.0	34584
890-2949-4	BH06	Soluble	Solid	300.0	34584
890-2949-5	BH07	Soluble	Solid	300.0	34584
890-2949-6	BH07	Soluble	Solid	300.0	34584
890-2949-7	BH08	Soluble	Solid	300.0	34584
890-2949-8	BH08	Soluble	Solid	300.0	34584
890-2949-9	BH09	Soluble	Solid	300.0	34584
890-2949-10	BH09	Soluble	Solid	300.0	34584
890-2949-11	BH10	Soluble	Solid	300.0	34584
890-2949-12	BH10	Soluble	Solid	300.0	34584
890-2949-13	BH11	Soluble	Solid	300.0	34584
890-2949-14	BH11	Soluble	Solid	300.0	34584
890-2949-15	BH12	Soluble	Solid	300.0	34584
890-2949-16	BH12	Soluble	Solid	300.0	34584
MB 880-34584/1-A	Method Blank	Soluble	Solid	300.0	34584
LCS 880-34584/2-A	Lab Control Sample	Soluble	Solid	300.0	34584
LCSD 880-34584/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34584
890-2949-8 MS	BH08	Soluble	Solid	300.0	34584
890-2949-8 MSD	BH08	Soluble	Solid	300.0	34584

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH05
Date Collected: 09/13/22 10:00
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-1
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			5.05 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 15:41	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 21:07	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 11:49	CH	EET MID

Client Sample ID: BH05
Date Collected: 09/13/22 10:10
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-2
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			5.01 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 16:01	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 22:12	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 11:56	CH	EET MID

Client Sample ID: BH06
Date Collected: 09/13/22 10:20
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-3
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			5.03 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 16:22	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 22:34	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 13:21	CH	EET MID

Client Sample ID: BH06
Date Collected: 09/13/22 10:30
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-4
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 16:43	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH06
Date Collected: 09/13/22 10:30
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-4
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			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 22:55	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 13:30	CH	EET MID

Client Sample ID: BH07
Date Collected: 09/13/22 10:40
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-5
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			5.01 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 17:03	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 23:17	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 13:38	CH	EET MID

Client Sample ID: BH07
Date Collected: 09/13/22 10:50
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-6
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			5.03 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 17:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/17/22 23:39	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 13:47	CH	EET MID

Client Sample ID: BH08
Date Collected: 09/13/22 11:00
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-7
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 17:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 00:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH08
Date Collected: 09/13/22 11:00
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.03 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 13:55	CH	EET MID

Client Sample ID: BH08
Date Collected: 09/13/22 11:10
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-8
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 18:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 00:21	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 14:04	CH	EET MID

Client Sample ID: BH09
Date Collected: 09/13/22 11:20
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-9
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 18:26	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 00:42	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 14:29	CH	EET MID

Client Sample ID: BH09
Date Collected: 09/13/22 11:30
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-10
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 18:46	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 01:03	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34849	09/19/22 14:37	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH10
Date Collected: 09/13/22 11:40
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-11
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 20:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 01:46	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 15:03	CH	EET MID

Client Sample ID: BH10
Date Collected: 09/13/22 11:50
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-12
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 20:31	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 02:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 15:11	CH	EET MID

Client Sample ID: BH11
Date Collected: 09/13/22 12:00
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-13
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 20:51	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 02:28	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 17:32	CH	EET MID

Client Sample ID: BH11
Date Collected: 09/13/22 12:10
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-14
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			5.05 g	5 mL	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 21:12	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Client Sample ID: BH11
Date Collected: 09/13/22 12:10
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-14
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			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 02:49	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 17:40	CH	EET MID

Client Sample ID: BH12
Date Collected: 09/13/22 12:20
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-15
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			4.95 g	5 mL	35335	09/25/22 12:23	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35348	09/26/22 13:02	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 03:10	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 17:49	CH	EET MID

Client Sample ID: BH12
Date Collected: 09/13/22 12:30
Date Received: 09/13/22 15:26

Lab Sample ID: 890-2949-16
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	35197	09/22/22 15:32	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35328	09/24/22 21:53	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35424	09/26/22 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			34845	09/19/22 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34600	09/15/22 15:00	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34707	09/18/22 03:31	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34584	09/15/22 11:21	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34849	09/19/22 17:57	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 FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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

Method Summary

Client: Ensolum
Project/Site: RDX FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

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 FEDERAL 28 #011H

Job ID: 890-2949-1
SDG: 03A1987032

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2949-1	BH05	Solid	09/13/22 10:00	09/13/22 15:26	0.5
890-2949-2	BH05	Solid	09/13/22 10:10	09/13/22 15:26	1
890-2949-3	BH06	Solid	09/13/22 10:20	09/13/22 15:26	0.5
890-2949-4	BH06	Solid	09/13/22 10:30	09/13/22 15:26	1
890-2949-5	BH07	Solid	09/13/22 10:40	09/13/22 15:26	0.5
890-2949-6	BH07	Solid	09/13/22 10:50	09/13/22 15:26	1
890-2949-7	BH08	Solid	09/13/22 11:00	09/13/22 15:26	0.5
890-2949-8	BH08	Solid	09/13/22 11:10	09/13/22 15:26	1
890-2949-9	BH09	Solid	09/13/22 11:20	09/13/22 15:26	0.5
890-2949-10	BH09	Solid	09/13/22 11:30	09/13/22 15:26	1
890-2949-11	BH10	Solid	09/13/22 11:40	09/13/22 15:26	0.5
890-2949-12	BH10	Solid	09/13/22 11:50	09/13/22 15:26	1
890-2949-13	BH11	Solid	09/13/22 12:00	09/13/22 15:26	0.5
890-2949-14	BH11	Solid	09/13/22 12:10	09/13/22 15:26	1
890-2949-15	BH12	Solid	09/13/22 12:20	09/13/22 15:26	0.5
890-2949-16	BH12	Solid	09/13/22 12:30	09/13/22 15:26	1

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

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 ☐ **PRP** ☐ **Brownfields** ☐ **RRC** ☐ **Superfund** ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	RDX Federal 28 #011H	Turn Around	
Project Number:	03A1987032	☑ Routine ☐ Rush	
Project Location:	Rural Eddy, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061174901		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	7.2	
Total Containers:		Corrected Temperature:	7.0	

ANALYSIS REQUEST

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2S0_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
BH05	S	9.13.22	10:00	0.5'	Grab/	1		X	X	X	
BH05	S	9.13.22	10:10	1'	Grab/	1		X	X	X	
BH06	S	9.13.22	10:20	0.5'	Grab/	1		X	X	X	Incident ID
BH06	S	9.13.22	10:30	1'	Grab/	1		X	X	X	nAPP2215732821
BH07	S	9.13.22	10:40	0.5'	Grab/	1		X	X	X	
BH07	S	9.13.22	10:50	1'	Grab/	1		X	X	X	
BH08	S	9.13.22	11:00	0.5'	Grab/	1		X	X	X	
BH08	S	9.13.22	11:10	1'	Grab/	1		X	X	X	
BH09	S	9.13.22	11:20	0.5'	Grab/	1		X	X	X	
BH09	S	9.13.22	11:30	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 SiO_2 Na Sr Tl 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 Tl 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		9.13.22 1520	4		
3			6		
5					

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2949-1
SDG Number: 03A1987032

Login Number: 2949
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2949-1
SDG Number: 03A1987032

Login Number: 2949
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/15/22 10:32 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	

ENSOLUM

APPENDIX G

Email Correspondence

From: Hamlet, Robert, EMNRD
To: Raley, Jim
Cc: Devon-Team; Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: Extension Approval - WPX Energy -- RDX 28-11 -- nAPP2215732821
Date: Wednesday, August 10, 2022 3:14:24 PM
Attachments: image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2215732821**

Jim,

Your request for an extension to **November 22nd, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Raley, Jim <Jim.Raley@dvn.com>
Sent: Wednesday, August 10, 2022 8:22 AM
To: Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; 'Devon-Team' <Devon-Team@ensolum.com>
Subject: [EXTERNAL] Extension Request - WPX Energy -- RDX 28-11 -- nAPP2215732821

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

Jocelyn,

WPX Energy Permian, LLC (WPX) is requesting an extension to the current deadline for a closure report or remediation work plan required in 19.15.29.12.B.(1) NMAC at the RDX Federal 28 #011.

A release of crude oil and produced water was discovered on May 26, 2022 and was assigned Incident Number nAPP2215732821. Site assessment activities have been completed. Due to the

release impacting areas off pad, a Sundry Request was submitted on June 7, 2022, and the Bureau of Land Management (BLM) required a traditional arch survey to be performed and requested to not begin remediation activities until the survey was completed and reviewed. Currently, the site is still being surveyed due to the extent of the release. Following final approval to proceed from the BLM, WPX will continue soil sampling characterization and/or remediation at the Site.

To provide enough time for remediation work and the completion of a closure report or remediation work plan, WPX requests an extension of the deadline to **November 22, 2022.**

RDX FEDERAL 28 #011
30-015-42109
nAPP2215732821

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

From: Joseph Hernandez
To: ocd.enviro@state.nm.us; "CFO_Spill, BLM_NM"
Cc: Raley, Jim; Devon-Team
Subject: WPX Site Sampling Activity Update (9/6-9/9/22)
Date: Friday, September 2, 2022 5:06:00 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between September 6 through September 9, 2022:

Site: RDX Federal 28 #011H
API: 30-015-42109
Incident Number: nAPP2215732821

Site: RDX 21-43
API: 30-015-40997
Incident Number: NAB1730640185

Site: Saragossa 16 State 2
API: 30-015-31584
Incident Number: pAB1625253965

Site: Brushy Gathering Facility
Incident Number: nAB1805133508

Site: UCBH WW 3
API: 30-015-24451
Incident Numbers: nAB1702454101

Site: RDX Federal 21 #044
API: 30-015-41193
Incident Number: nAPP2115533694

Joseph S. Hernandez
Senior Geologist
281-702-2329
Ensolum, LLC

From: Joseph Hernandez
To: ocd.enviro@state.nm.us; "CFO_Spill, BLM_NM"
Cc: Devon-Team; Raley, Jim; Anderson, Lacee
Subject: WPX Site Sampling Activity Update (9/12-9/16/22)
Date: Friday, September 9, 2022 4:13:00 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between September 12 through September 16, 2022:

Site: RDX Federal 28 #011H
API: 30-015-42109
Incident Number: nAPP2215732821

Site: RDX 21-43
API: 30-015-40997
Incident Number: NAB1730640185

Site: UCBH WW 3
API: 30-015-24451
Incident Numbers: nAB1702454101

Site: RDX Federal 21 #044
API: 30-015-41193
Incident Number: nAPP2115533694

Site: EP USA 3
API: 30-015-24249
Incident Number: nAB1622531873

Site: Yates Federal #001
API: 30-015-24602
Incident Number: NRM2011138650

Joseph S. Hernandez
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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 161506

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 161506
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2215732821 RDX FEDERAL 28 #011, thank you. This closure is approved.	2/21/2023