

# **CLOSURE REQUEST REPORT**

RDX 17 Federal Com #006H Eddy County, New Mexico Incident Number nRM2019548894

Prepared For: WPX Energy Permian, LLC 5315 Buena Vista Dr. Carlsbad, NM 88220

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#### **SYNOPSIS**

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of WPX Energy Permian, LLC (WPX), presents the following Closure Request Report (CRR) detailing continued excavation and soil sampling events conducted in accordance with an approved Remediation Work Plan Addendum (RWPA) to address an inadvertent release of produced water at the RDX 17 Federal Com #006H (Site) and subsequent reclamation activities to fulfill complete incident closure status. Based on laboratory analytical results from confirmation soil sampling activities associated with restorative actions completed at the Site, WPX is requesting No Further Action (NFA) for Incident Number nRM2019548894.

#### SITE LOCATION AND RELEASE BACKGROUND

The Site is located in Unit J, Section 17, Township 26 South, Range 30 East, in Eddy County, New Mexico (32.041235°N, 103.9018005°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**).

An inadvertent reportable spill occurred on July 5, 2020, due to a failed connection of a produced water poly line, causing the release of approximately 35 barrels (bbls) of produced water along a recently reclaimed lease road. Vacuum trucks were immediately dispatched and recovered approximately 5 bbls of produced water. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Corrective Action Form C-141 (Form C-141), which was received by the NMOCD on July 5, 2020, and was assigned Incident Number nRM2019548894.

A third-party environmental consultant oversaw remediation activities in accordance with an approved Remediation Work Plan (RWP) and determined that further remediation was required outside of the original scope of work presented in the RWP. As such, the RWPA was prepared and proposed corrective actions to address the remaining residual impacted soil defined by the applicable Site Closure Criteria and a sampling variance of 1,000 square feet (sqft) due to the size of the anticipated excavation area. The RWPA was submitted to the NMOCD and approved on April 26, 2024.

As detailed below, the excavation was completed by April 9, 2024, but in order to accommodate enough time for the completion of final restoration activities, compilation of laboratory analytical results and field summaries for this CRR, WPX requested a 90-day extension from the deadline above. The extension request was granted by the NMOCD for July 25, 2024.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

As previously described in the approved RWPA, the Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) considering depth to groundwater and the proximity to:

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

Closure Request Report Incident Number nRM2019548894 RDX 17 Federal Com #006H Based on the results from the desktop review and the estimated depth to groundwater at the Site, the following Closure Criteria was applied:

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

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

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

#### **EXCAVATION SOIL SAMPLING ACTIVITIES**

From April 3 through April 9, 2024, Etech directed excavation of identified residual impacts via heavy equipment based on laboratory analytical results associated with delineation soil sampling activities, detailed corrective actions in the approved RWPA, and visual observation. The excavation was advanced to 4 feet below ground surface (bgs) and laterally driven by field screening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips.

Following the removal of impacted soil, Etech collected 5-point composite confirmation soil samples from the floors (FS01 through FS22) and sidewalls (SW01 through SW04) of the excavation at the approved sampling frequency of 1,000 square feet (sqft). The 5-point composite soil samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. The samples were then placed into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech, Inc. in Farmington, New Mexico, for analysis of the COCs.

Approximately 3,920 cubic yards (CY) of additional impacted soil was removed from the Site, totaling approximately 9,740 CY removed from the Site when including completed remediation detailed in the RWPA. Impacted soil was transported to the R360 Red Bluff Landfill Facility in Orla, Texas under WPX approved manifests. The continued excavation extent and locations of confirmation excavation soil samples are shown in **Figure 2** and **Figure 2A** in **Appendix A**. Photographic documentation of excavation activities is included in **Appendix C**.

#### LABORATORY ANALYTICAL RESULTS

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

Closure Request Report Incident Number nRM2019548894 RDX 17 Federal Com #006H

#### RECLAMATION

Upon receipt of laboratory analytical results, the excavation, which measured approximately 21,692 sqft, was backfilled with 3,920 CY of clean, locally sourced soil and the Site was restored to "as close to its original state" as possible. The final soil cover was contoured to match the Site's pre-existing grade to prevent ponding of water and erosion. BLM Seed Mix #3 (Shallow Sites) will be hand-broadcasted over the entire disturbed area in the next favorable growing season following BLM guidelines (**Appendix F**). The selected seed blend will provide the maximum results of vegetation regrowth and ground surface coverage to match pre-existing conditions at the Site.

On April 29, 2024, Etech assessed the backfill material for its capacity to host vegetative growth. One discrete soil sample was collected from the soil cover of the excavation area (SC01) and outside of the excavation disturbance area (BG01) at 0.5-foot bgs via hand shovel and field screened for VOCs and chloride, as previously described, and qualitatively evaluated for nutrient density of pH, Nitrogen (N), Phosphorus (P), and Potassium (K) utilizing a HoldAll® Soil Test Kit according to the operating manual, which is included in **Appendix G**.

Field screening results indicated the backfill material appears to correlate with surrounding soil conditions currently supporting native vegetative growth, as summarized in **Table 2** included in **Appendix D**. The location of the restoration area and field screened soil sample locations are shown in **Figure 3** in **Appendix A**. Photographic documentation of restoration activities is included in **Appendix C**.

#### **CLOSURE REQUEST**

Based on laboratory analytical results for confirmation excavation soil samples, WPX believes that residual soil impacts associated with the inadvertent release have been excavated and removed from Site and subsequently restored "as close to its original state" as possible. Concentrations of COCs for all final confirmation excavation soil samples were below the Site Closure Criteria and/or reclamation standard. On July 10, 2024, a CRR was submitted to the BLM as requested on the RWPA's condition for approval and approved on July 18, 2024. WPX and BLM believes the completed remedial actions have mitigated impacts at the Site and the requirements set forth in NMAC 19.15.29.13 regulations to be protective of human health, the environment and groundwater. As such, NFA appears warranted until the next favorable growing season and this CRR associated with Incident Number nRM2019548894 should be respectfully considered for Closure by the NMOCD.

If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (432) 305-6413 or <u>joseph@etechenv.com</u> or Erick Herrera at (432) 305-6416 or <u>erick@etechenv.com</u>. **Appendix H** provides correspondence email notification receipts from NMOCD, WPX, and BLM approval associated with the subject release. Previous remediation activities and soil sample analytical results for the subject release can be referenced in the approved RWPA and RWP in **Appendix I**.

Sincerely, Etech Environmental and Safety Solutions, Inc.

Erich H

Erick Herrera Project Geologist

syn Stoh

Joseph S. Hernandez Senior Managing Geologist

Closure Request Report Incident Number nRM2019548894 RDX 17 Federal Com #006H cc: Jim Raley, WPX New Mexico Oil Conservation Division Bureau of Land Management

#### **Appendices:**

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

# **APPENDIX A**

# Figures

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# APPENDIX B

# **Referenced Well Records**

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		HR	1						MONITORING W	ELL COMPLETIO	N DIAGRAM
				IAN	C F		Boring/Wel		W-1	Location: RDX 17	/ #3
		S O	LUI		NS		Date:			Client:	
Drilling Me	athod:	0.0	Sampling N				Logged By:		8/2020	WPX En	ergy
~	Air Rotar	у	Sampting N		one		Logged By.		nn, PG	Talon L	PE
Gravel Pac	• •	. 1	Gravel Pac	k Depth Inte			Seal Type:	[	Seal Depth Interval:	Latitude:	165
Casing Typ	0/20 Sar	Diameter:		3 B Depth Inter	ags val:			one al Depth (ft. BC	None SS):	32.0367 Longitude:	65
PVC		2-inch		0-102 fe	eet bgs			10	07	-103.895	
Screen Typ PVC	e:	Slot: 0.010-in	nch	Diameter: 2-inch		Interval: 107 ft	Well Total	Depth (ft. BGS)		Depth to Water (ft. BTOC): $> 107$	DTW Date: 12/16/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	NSCS	Sample ID		y/Remarks	Well Completion
0 5 10 15 20 25	NM	L	D	N	N	NM	SP	NS	Pale orange poor	ly graded fine sand	- - - -
30 35	NM	L	D	N	N	NM	SP	NS		th slight increase in d and gravel	
40 45 50	NM	L	D	N	N	NM	SP	NS		ly graded fine sand y slight silt	
55	NM	L	D	Ν	Ν	NM	SP	NS	Pale orange poor	ly graded fine sand	
60	NM	L	D	N	Ν	NM	SW	NS	Pale orange wel	l graded fine sand	†
65 70 75 80 85	NM	М	SL M	N	N	NM	SM	NS		layey silty fine sand se sand and gravel	
90 95 100 105	NM	L	SL M	N	N	NM	SP	NS		ly sorted fine sand - )7' BGS	

# APPENDIX C

# Photographic Log

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# APPENDIX D

# Tables

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CTEC	Table 1 SOIL SAMPLE ANALYTICAL RESULTS WPX Energy Permian, LLC RDX 17 Federal Com #006H Eddy County, New Mexico												
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)			
NMOCD Table I Closure Release (NMAC 19.15.2		s Impacted by a	10	50	NE	NE	NE	1,000	2,500	20,000			
Excavation Soil Samples - Incident Number nRM2019548894													
FS01	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,280			
FS02	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,430			
FS03	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,750			
FS04	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,930			
FS05	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,390			
FS06	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,800			
FS07	04/09/2024	4	<0.0250	<0.0500	<20.0	29.8	<50.0	29.8	29.8	1,290			
FS08	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,630			
FS09	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,480			
FS10	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	3,070			
FS11	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,180			
FS12	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	3,310			
FS13	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,440			
FS14	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,280			
FS15	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,700			
FS16	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,490			
FS17	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,230			
FS18	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	3,310			
FS19	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,550			
FS20	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,490			
FS21	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,880			
FS22	04/09/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,020			
SW01 <sup>†</sup>	04/09/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	375			
SW02 <sup>†</sup>	04/09/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	88.1			
SW03 <sup>†</sup>	04/09/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	102			
SW04 <sup>†</sup>	04/09/2024	0-4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	87.3			

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics; ORO: Oil Range Organics DRO: Diesel Range Organics; TPH: Total Petroleum Hydrocarbon

NMOCD: New Mexico Oil Conservation Division NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

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

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ete(	CH		SOIL SAMPLE WPX Ene RDX 17 Fe	Table 1 ANALYTICAL RES rgy Permian, LLC ederal Com #006H unty, New Mexico	: 1		
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Nitrogen	Potash	Phosphorous	PH (ppm)	Chloride (ppm)
		Field	Screening Soil Sampl	es - Incident Number r	nRM2019548894	•	
SC01	04/29/2024	0.5	Very Low	High	Low	7.50	116
BG01	04/29/2024	0.5	Very Low	High	Very Low	7.50	<116

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# APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation

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5796 U.S. Hwy 64 Farmington, NM 87401

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





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### **Analytical Report**

WPX Energy - Carlsbad

Project Name: RDX 17 Federal Com #006H

Work Order: E404085

Job Number: 01058-0007

Received: 4/11/2024

Revision: 2

Report Reviewed By:

Walter Hinchman Laboratory Director 4/18/24

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 4/18/24

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220 C

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Project Name: RDX 17 Federal Com #006H Workorder: E404085 Date Received: 4/11/2024 8:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/11/2024 8:00:00AM, under the Project Name: RDX 17 Federal Com #006H.

The analytical test results summarized in this report with the Project Name: RDX 17 Federal Com #006H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

Walter Hinchman Laboratory Director Office: 505-632-1881 Cell: 775-287-1762 whinchman@envirotech-inc.com

Field Offices:

Southern New Mexico Area Lynn Jarboe Laboratory Technical Representative Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@envirotech-inc.com Raina Schwanz Laboratory Administrator Office: 505-632-1881 rainaschwanz@envirotech-inc.com Alexa Michaels Sample Custody Officer Office: 505-632-1881 labadmin@envirotech-inc.com

Michelle Golzales Client Representative Office: 505-421-LABS(5227) Cell: 505-947-8222 mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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#### Received by OCD: 7/19/2024 8:47:33 AM

#### Sample Summarv

		Sample Sum	mary		
WPX Energy - Carlsbad		Project Name:	RDX 17 Federal Co	om #006H	Reported:
5315 Buena Vista Dr Carlsbad NM, 88220		Project Number: Project Manager:	01058-0007 Gilbert Moreno		04/18/24 12:38
Curisbud 1411, 00220		Troject Manager.	Gilbert Moleno		04/10/24 12:50
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 4'	E404085-01A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS02 4'	E404085-02A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS03 4'	E404085-03A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS04 4'	E404085-04A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS05 4'	E404085-05A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS06 4'	E404085-06A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS07 4'	E404085-07A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS08 4'	E404085-08A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS09 4'	E404085-09A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS10 4'	E404085-10A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS11 4'	E404085-11A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS12 4'	E404085-12A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS13 4'	E404085-13A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS14 4'	E404085-14A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS15 4'	E404085-15A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS16 4'	E404085-16A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS17 4'	E404085-17A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS18 4'	E404085-18A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS19 4'	E404085-19A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS20 4'	E404085-20A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS21 4'	E404085-21A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
FS22 4'	E404085-22A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.



	S	Sample D	ata			
WPX Energy - Carlsbad	Project Nam	e: RDZ	K 17 Federal	Com #006H		
5315 Buena Vista Dr	Project Num	ber: 0103	58-0007			Reported:
Carlsbad NM, 88220	Project Man	ager: Gilb	ert Moreno			4/18/2024 12:38:26PM
		FS01 4'				
		E404085-01				
		Reporting				
Analyte	Result	Limit	Diluti	on Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	А	nalyst: RKS		Batch: 2415063
Benzene	ND	0.0250	1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250	1	04/11/24	04/15/24	
Toluene	ND	0.0250	1	04/11/24	04/15/24	
o-Xylene	ND	0.0250	1	04/11/24	04/15/24	
p,m-Xylene	ND	0.0500	1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250	1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		105 %	70-130	04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	04/11/24	04/15/24	
Surrogate: Toluene-d8		112 %	70-130	04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	А	nalyst: RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		105 %	70-130	04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	04/11/24	04/15/24	
Surrogate: Toluene-d8		112 %	70-130	04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	А	Analyst: NV		Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0	1	04/15/24	04/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/15/24	04/15/24	
Surrogate: n-Nonane		82.3 %	50-200	04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	А	nalyst: IY		Batch: 2415066
Chloride	2280	200	10	04/11/24	04/12/24	



		ample D	uca				
WPX Energy - Carlsbad	Project Name	: RDZ	X 17 Feder	al Com	#006H		
5315 Buena Vista Dr	Project Numb	Project Number: 01058-0007					
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM		
		FS02 4'					
		E404085-02					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.7 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.1 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.7 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.1 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2416028	
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/15/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		83.8 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	1430	200		10	04/11/24	04/12/24	



		ample D	uu				
WPX Energy - Carlsbad	Project Name:	RD	K 17 Feder	ral Com	#006H		
5315 Buena Vista Dr	Project Numbe	er: 0103	58-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moren		4/18/2024 12:38:26PM		
		FS03 4'					
		E404085-03					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Fotal Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		97.8 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/15/24	
urrogate: Toluene-d8		97.8 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/15/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		83.9 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	1750	40.0		2	04/11/24	04/12/24	



		impic D					
WPX Energy - Carlsbad	Project Name:		K 17 Feder	al Com	#006H		
5315 Buena Vista Dr	Project Numbe		58-0007				Reported:
Carlsbad NM, 88220	Project Manag	er: Gilb	ert Moren		4/18/2024 12:38:26PM		
		FS04 4'					
		E404085-04					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst:	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
p,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		103 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.0 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		103 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.0 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/15/24	
Oil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		82.7 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	IY		Batch: 2415066
Chloride	1930	20.0		1	04/11/24	04/12/24	



		mpic D					
WPX Energy - Carlsbad	Project Name:		K 17 Feder	ral Com	#006H		
5315 Buena Vista Dr	Project Number		58-0007				Reported:
Carlsbad NM, 88220	Project Manage	er: Gilb	ert Moren	0			4/18/2024 12:38:26PM
		FS05 4'					
	]	E404085-05					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		102 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		103 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8	2	96.9 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: RKS			Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		102 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		103 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		96.9 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/15/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		82.5 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	1390	20.0		1	04/11/24	04/12/24	



		impic D					
WPX Energy - Carlsbad	Project Name:	RDZ					
5315 Buena Vista Dr	Project Numbe	er: 0105	58-0007	Reported:			
Carlsbad NM, 88220	Project Manager: Gilbert Moreno						4/18/2024 12:38:26PM
		FS06 4'					
	-	E404085-06					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.6 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		97.3 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: RKS			Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		99.6 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		97.3 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/15/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		81.3 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: IY		Batch: 2415066	
Chloride	2800	40.0		2	04/11/24	04/12/24	



		ampie D					
WPX Energy - Carlsbad	Project Name:						
5315 Buena Vista Dr	Project Numb	er: 0103	58-0007	Reported:			
Carlsbad NM, 88220	Project Manager: Gilbert Moreno						4/18/2024 12:38:26PM
		FS07 4'					
		E404085-07					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.7 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.0 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: RKS		Batch: 2415063	
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.7 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.0 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	29.8	25.0		1	04/15/24	04/15/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/15/24	
Surrogate: n-Nonane		81.4 %	50-200		04/15/24	04/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	1290	20.0		1	04/11/24	04/12/24	



		mpic D					
WPX Energy - Carlsbad	Project Name:						
5315 Buena Vista Dr	Project Numbe		58-0007	Reported:			
Carlsbad NM, 88220	Project Manager: Gilbert Moreno						4/18/2024 12:38:26PM
		FS08 4'					
	]	E404085-08					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		102 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.9 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: RKS			Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		102 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		97.9 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		80.8 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst: IY			Batch: 2415066
Chloride	1630	100		5	04/11/24	04/12/24	



		mpic D					
WPX Energy - Carlsbad	Project Name:						
5315 Buena Vista Dr	Project Numbe		58-0007	Reported:			
Carlsbad NM, 88220	Project Manager: Gilbert Moreno						4/18/2024 12:38:26PM
		FS09 4'					
	]	E404085-09					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Fotal Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		107 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		98.1 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.8 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst: RKS			Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		107 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		98.1 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		98.8 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		82.3 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2415066	
Chloride	2480	40.0		2	04/11/24	04/12/24	


		ampie D					
WPX Energy - Carlsbad	Project Name:						
5315 Buena Vista Dr	Project Numb	er: 0103		Reported:			
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM		
		FS10 4'					
		E404085-10					
		Reporting					
Analyte	Result	Limit	Dilı	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst:	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
o-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		98.2 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		99.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst:	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		98.2 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		99.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2416028	
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		82.7 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst:	IY		Batch: 2415066
Chloride	3070	200	1	0	04/11/24	04/12/24	



	D	ample D					
WPX Energy - Carlsbad	Project Name	: RD2					
5315 Buena Vista Dr	Project Numb	oer: 0103	58-0007		Reported:		
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM		
		FS11 4'					
		E404085-11					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Fotal Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		96.8 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		97.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		96.8 %	70-130		04/11/24	04/15/24	
urrogate: Toluene-d8		97.7 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2416028	
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		80.9 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	2180	200	1	10	04/11/24	04/12/24	



	2	ample D						
WPX Energy - Carlsbad	Project Name	Project Name: RDX 17 Federal Com #006H						
5315 Buena Vista Dr	Project Numb	Project Number: 01058-0007						
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moren	0			4/18/2024 12:38:26PM	
		FS12 4'						
		E404085-12						
		Reporting						
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes	
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063	
Benzene	ND	0.0250		1	04/11/24	04/15/24		
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24		
Toluene	ND	0.0250		1	04/11/24	04/15/24		
p-Xylene	ND	0.0250		1	04/11/24	04/15/24		
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24		
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24		
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24		
Surrogate: 1,2-Dichloroethane-d4		99.3 %	70-130		04/11/24	04/15/24		
Surrogate: Toluene-d8		98.1 %	70-130		04/11/24	04/15/24		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	: RKS		Batch: 2415063	
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24		
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24		
Surrogate: 1,2-Dichloroethane-d4		99.3 %	70-130		04/11/24	04/15/24		
Surrogate: Toluene-d8		98.1 %	70-130		04/11/24	04/15/24		
Nonhalogenated Organics by EPA 8015D - DRO/ORC	mg/kg	mg/kg	Analyst: NV			Batch: 2416028		
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24		
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24		
Surrogate: n-Nonane		81.4 %	50-200		04/15/24	04/16/24		
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066	
Chloride	3310	200		10	04/11/24	04/12/24		



		ample D					
WPX Energy - Carlsbad	Project Name:	RD2					
5315 Buena Vista Dr	Project Numb	er: 010	Reported:				
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM		
		FS13 4'					
		E404085-13					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		111 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		101 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		111 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		101 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst	NV		Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Oil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		81.3 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	IY		Batch: 2415066
Chloride	1440	200	1	10	04/11/24	04/12/24	



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WPX Energy - Carlsbad	Project Name	e: RDZ	K 17 Feder	al Com	#006H		
5315 Buena Vista Dr	Project Numb		Reported:				
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM		
		FS14 4'					
		E404085-14					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/15/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/15/24	
Toluene	ND	0.0250		1	04/11/24	04/15/24	
p-Xylene	ND	0.0250		1	04/11/24	04/15/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/15/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		93.3 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		99.1 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/15/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/15/24	
Surrogate: 1,2-Dichloroethane-d4		93.3 %	70-130		04/11/24	04/15/24	
Surrogate: Toluene-d8		99.1 %	70-130		04/11/24	04/15/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		85.5 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	2280	40.0		2	04/11/24	04/12/24	



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WPX Energy - Carlsbad	Project Name:		K 17 Feder				
5315 Buena Vista Dr	Project Numbe	•					
Carlsbad NM, 88220	Project Manage	er: Gilb	ert Moren	0			4/18/2024 12:38:26PM
		FS15 4'					
	]	E404085-15					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/16/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/16/24	
Toluene	ND	0.0250		1	04/11/24	04/16/24	
p-Xylene	ND	0.0250		1	04/11/24	04/16/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/16/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		94.8 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		101 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		94.8 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		101 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Oil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		84.6 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	IY		Batch: 2415066
Chloride	2700	40.0		2	04/11/24	04/12/24	



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WPX Energy - Carlsbad	Project Name:	Project Name: RDX 17 Federal Com #006H						
5315 Buena Vista Dr	Project Numbe	er: 0103	58-0007		Reported:			
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno		4/18/2024 12:38:26PM			
		FS16 4'						
		E404085-16						
		Reporting						
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes	
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063	
Benzene	ND	0.0250		1	04/11/24	04/16/24		
Ethylbenzene	ND	0.0250		1	04/11/24	04/16/24		
Toluene	ND	0.0250		1	04/11/24	04/16/24		
p-Xylene	ND	0.0250		1	04/11/24	04/16/24		
o,m-Xylene	ND	0.0500		1	04/11/24	04/16/24		
Fotal Xylenes	ND	0.0250		1	04/11/24	04/16/24		
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/16/24		
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130		04/11/24	04/16/24		
Surrogate: Toluene-d8		101 %	70-130		04/11/24	04/16/24		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063	
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/16/24		
Surrogate: Bromofluorobenzene		104 %	70-130		04/11/24	04/16/24		
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130		04/11/24	04/16/24		
urrogate: Toluene-d8		101 %	70-130		04/11/24	04/16/24		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028	
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24		
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24		
Surrogate: n-Nonane		84.8 %	50-200		04/15/24	04/16/24		
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066	
Chloride	2490	200		10	04/11/24	04/12/24		



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WPX Energy - Carlsbad	Project Name	: RD2	K 17 Feder	al Com	#006H		
5315 Buena Vista Dr	Project Numb	er: 010:	58-0007		Reported:		
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moreno	0			4/18/2024 12:38:26PM
		FS17 4'					
		E404085-17					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/16/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/16/24	
Toluene	ND	0.0250		1	04/11/24	04/16/24	
p-Xylene	ND	0.0250		1	04/11/24	04/16/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/16/24	
Fotal Xylenes	ND	0.0250		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.9 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		83.9 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		106 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.9 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		83.9 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		86.0 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	2230	200		10	04/11/24	04/12/24	



		mpic D					
WPX Energy - Carlsbad	Project Name:		K 17 Federa				
5315 Buena Vista Dr	Project Number			Reported:			
Carlsbad NM, 88220	Project Manage	er: Gilb	ert Moreno				4/18/2024 12:38:26PM
		FS18 4'					
	]	E404085-18					
		Reporting					
Analyte	Result	Limit	Dilu	tion	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	1	Analyst: F	RKS		Batch: 2415063
Benzene	ND	0.0250	1		04/11/24	04/16/24	
Ethylbenzene	ND	0.0250	1		04/11/24	04/16/24	
Toluene	ND	0.0250	1		04/11/24	04/16/24	
p-Xylene	ND	0.0250	1		04/11/24	04/16/24	
p,m-Xylene	ND	0.0500	1		04/11/24	04/16/24	
Total Xylenes	ND	0.0250	1		04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8	1	97.9 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	1	Analyst: F	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0	1		04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		97.9 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	1	Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0	1		04/15/24	04/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1		04/15/24	04/16/24	
Surrogate: n-Nonane		84.4 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	1	Analyst: I	Y		Batch: 2415066
Chloride	3310	200	10	0	04/11/24	04/12/24	



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WPX Energy - Carlsbad	Project Name	: RD2	K 17 Fede	ral Com	#006H		
5315 Buena Vista Dr	Project Numb	oer: 0103	58-0007		Reported:		
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moren	10			4/18/2024 12:38:26PM
		FS19 4'					
		E404085-19					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/16/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/16/24	
Toluene	ND	0.0250		1	04/11/24	04/16/24	
-Xylene	ND	0.0250		1	04/11/24	04/16/24	
,m-Xylene	ND	0.0500		1	04/11/24	04/16/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.5 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		97.6 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.5 %	70-130		04/11/24	04/16/24	
urrogate: Toluene-d8		97.6 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		85.4 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415066
Chloride	2550	40.0		2	04/11/24	04/12/24	



		mpic D					
WPX Energy - Carlsbad	Project Name:	RDX	X 17 Feder				
5315 Buena Vista Dr	Project Numbe	r: 0105	58-0007	Reported:			
Carlsbad NM, 88220	Project Manage	er: Gilb	ert Moreno	С			4/18/2024 12:38:26PM
		FS20 4'					
	]	E404085-20					
		Reporting					
Analyte	Result	Limit	Dil	ution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst:	RKS		Batch: 2415063
Benzene	ND	0.0250		1	04/11/24	04/16/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/16/24	
Toluene	ND	0.0250		1	04/11/24	04/16/24	
p-Xylene	ND	0.0250		1	04/11/24	04/16/24	
p,m-Xylene	ND	0.0500		1	04/11/24	04/16/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		97.1 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst:	RKS		Batch: 2415063
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130		04/11/24	04/16/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		04/11/24	04/16/24	
Surrogate: Toluene-d8		97.1 %	70-130		04/11/24	04/16/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst: NV			Batch: 2416028
Diesel Range Organics (C10-C28)	ND	25.0		1	04/15/24	04/16/24	
Oil Range Organics (C28-C36)	ND	50.0		1	04/15/24	04/16/24	
Surrogate: n-Nonane		83.8 %	50-200		04/15/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst:	: IY		Batch: 2415066
Chloride	1490	20.0		1	04/11/24	04/12/24	



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WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name Project Numb Project Mana	ber: 010	X 17 Federal Com 58-0007 pert Moreno	#006H		<b>Reported:</b> 4/18/2024 12:38:26PM
		FS21 4'				
		E404085-21				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst	:: EG		Batch: 2415071
Benzene	ND	0.0250	1	04/11/24	04/14/24	
Ethylbenzene	ND	0.0250	1	04/11/24	04/14/24	
Toluene	ND	0.0250	1	04/11/24	04/14/24	
p-Xylene	ND	0.0250	1	04/11/24	04/14/24	
p,m-Xylene	ND	0.0500	1	04/11/24	04/14/24	
Total Xylenes	ND	0.0250	1	04/11/24	04/14/24	
Surrogate: 4-Bromochlorobenzene-PID		94.1 %	70-130	04/11/24	04/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst	:: EG		Batch: 2415071
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/11/24	04/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		91.6 %	70-130	04/11/24	04/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2416044
Diesel Range Organics (C10-C28)	ND	25.0	1	04/16/24	04/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/16/24	04/17/24	
Surrogate: n-Nonane		108 %	50-200	04/16/24	04/17/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst	:: IY		Batch: 2415048
Chloride	1880	200	10	04/11/24	04/13/24	



	0	ampie D	ala			
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name Project Numb Project Manaş	oer: 010	X 17 Federal Con 58-0007 ert Moreno	n #006H		<b>Reported:</b> 4/18/2024 12:38:26PM
		FS22 4'				
		E404085-22				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analys	st: EG		Batch: 2415071
Benzene	ND	0.0250	1	04/11/24	04/14/24	
Ethylbenzene	ND	0.0250	1	04/11/24	04/14/24	
Toluene	ND	0.0250	1	04/11/24	04/14/24	
p-Xylene	ND	0.0250	1	04/11/24	04/14/24	
o,m-Xylene	ND	0.0500	1	04/11/24	04/14/24	
Fotal Xylenes	ND	0.0250	1	04/11/24	04/14/24	
Surrogate: 4-Bromochlorobenzene-PID		94.7 %	70-130	04/11/24	04/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analys	st: EG		Batch: 2415071
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/11/24	04/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.6 %	70-130	04/11/24	04/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analys	st: KM		Batch: 2416044
Diesel Range Organics (C10-C28)	ND	25.0	1	04/16/24	04/17/24	
Dil Range Organics (C28-C36)	ND	50.0	1	04/16/24	04/17/24	
Surrogate: n-Nonane		107 %	50-200	04/16/24	04/17/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analys	st: IY		Batch: 2415048
Chloride	2020	40.0	2	04/11/24	04/13/24	



# **QC Summary Data**

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WPX Energy - Carlsbad		Project Name:		DX 17 Federal	Com #00	6H			Reported:
5315 Buena Vista Dr		Project Number:		1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno				4/1	8/2024 12:38:26PM
		Volatile Organic	Compo	unds by EP	A 82601	B			Analyst: RKS
Analyte		Reporting	Spike	Source		Rec		RPD	
5	Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415063-BLK1)							Prepared: 04	4/11/24 Anal	yzed: 04/15/24
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
p-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.677		0.500		135	70-130			S3
			0.500		101	70-130			~~
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		93.7	70-130			
Surrogate: Toluene-d8	0.469		0.500		93.7	70-130			
LCS (2415063-BS1)							Prepared: 04	4/11/24 Anal	yzed: 04/15/24
Benzene	2.48	0.0250	2.50		99.4	70-130			
Ethylbenzene	2.41	0.0250	2.50		96.4	70-130			
Toluene	2.70	0.0250	2.50		108	70-130			
p-Xylene	2.06	0.0250	2.50		82.3	70-130			
p,m-Xylene	4.12	0.0500	5.00		82.5	70-130			
Total Xylenes	6.18	0.0250	7.50		82.4	70-130			
Surrogate: Bromofluorobenzene	0.451		0.500		90.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.509		0.500		102	70-130			
Surrogate: Toluene-d8	0.590		0.500		118	70-130			
Matrix Spike (2415063-MS1)				Source: <b>F</b>	404085-	13	Prepared: 04	4/11/24 Anal	yzed: 04/15/24
Benzene	2.61	0.0250	2.50	ND	104	48-131			
Ethylbenzene	2.52	0.0250	2.50	ND	101	45-135			
Toluene	2.44	0.0250	2.50	ND	97.6	48-130			
p-Xylene	2.58	0.0250	2.50	ND	103	43-135			
o,m-Xylene	5.53	0.0500	5.00	ND	111	43-135			
Total Xylenes	8.11	0.0250	7.50	ND	108	43-135			
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
surrogate: 1,2-Dichloroethane-d4 Surrogate: Toluene-d8	0.506		0.500		99.7	70-130			
Matrix Spike Dup (2415063-MSD1)				Source: H	404085-	13	Prepared: 04	1/11/24 Anal	yzed: 04/15/24
Benzene	2.63	0.0250	2.50	ND	105	48-131	0.630	23	,
Ethylbenzene	2.54	0.0250	2.50	ND	102	45-135	0.751	27	
Foluene	2.44	0.0250	2.50	ND	97.6	48-130	0.0205	24	
p-Xylene	2.83	0.0250	2.50	ND	113	43-135	9.14	27	
o,m-Xylene	5.62	0.0500	5.00	ND	112	43-135	1.57	27	
Fotal Xylenes	8.44	0.0250	7.50	ND	113	43-135	4.04	27	
Surrogate: Bromofluorobenzene	0.577		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.492		0.500		98.3	70-130			
			0.500		101	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	10-150			



# **QC Summary Data**

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WPX Energy - Carlsbad		Project Name:		DX 17 Federa	ul Com #00	)6H			Reported:
5315 Buena Vista Dr		Project Number:		1058-0007					
Carlsbad NM, 88220		Project Manager:	G	ilbert Moreno	1				4/18/2024 12:38:26PM
		Volatile O	rganics	by EPA 802	21B				Analyst: EG
Analyte		Reporting	Spike	Source		Rec		RPD	
	Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415071-BLK1)							Prepared: 0	4/11/24 A	nalyzed: 04/13/24
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.44		8.00		93.1	70-130			
LCS (2415071-BS1)							Prepared: 0	4/11/24 A	analyzed: 04/13/24
Benzene	4.72	0.0250	5.00		94.4	70-130			
Ethylbenzene	4.70	0.0250	5.00		94.0	70-130			
Toluene	4.70	0.0250	5.00		94.0	70-130			
o-Xylene	4.67	0.0250	5.00		93.4	70-130			
p,m-Xylene	9.47	0.0500	10.0		94.7	70-130			
Total Xylenes	14.1	0.0250	15.0		94.3	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.65		8.00		95.6	70-130			
Matrix Spike (2415071-MS1)				Source:	E404100-	06	Prepared: 0	4/11/24 A	nalyzed: 04/13/24
Benzene	5.14	0.0250	5.00	ND	103	54-133			
Ethylbenzene	5.11	0.0250	5.00	ND	102	61-133			
Toluene	5.12	0.0250	5.00	ND	102	61-130			
p-Xylene	5.06	0.0250	5.00	ND	101	63-131			
o,m-Xylene	10.3	0.0500	10.0	ND	103	63-131			
Total Xylenes	15.3	0.0250	15.0	ND	102	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			
Matrix Spike Dup (2415071-MSD1)				Source:	E404100-	06	Prepared: 0	4/11/24 A	nalyzed: 04/13/24
Benzene	5.37	0.0250	5.00	ND	107	54-133	4.46	20	
Ethylbenzene	5.34	0.0250	5.00	ND	107	61-133	4.43	20	
Toluene	5.35	0.0250	5.00	ND	107	61-130	4.27	20	
o-Xylene	5.30	0.0250	5.00	ND	106	63-131	4.68	20	
p,m-Xylene	10.7	0.0500	10.0	ND	107	63-131	4.42	20	
Total Xylenes	16.0	0.0250	15.0	ND	107	63-131	4.50	20	
Surrogate: 4-Bromochlorobenzene-PID	7.55		8.00		94.3	70-130			



# **QC Summary Data**

		<b>E</b> - 10		ary Duc					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:		RDX 17 Federa 01058-0007 Gilbert Moreno	l Com #00	6H			<b>Reported:</b> 4/18/2024 12:38:26PM
	No	onhalogenated O	rganic	s by EPA 80	15D - G	RO			Analyst: RKS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415063-BLK1)							Prepared: 0	4/11/24 <i>A</i>	Analyzed: 04/15/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.677		0.500		135	70-130			S3
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.469		0.500		<b>93</b> .7	70-130			
LCS (2415063-BS2)							Prepared: 0	4/11/24 <i>A</i>	Analyzed: 04/15/24
Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130			
Surrogate: Bromofluorobenzene	0.536		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.508		0.500		102	70-130			
Surrogate: Toluene-d8	0.490		0.500		98.0	70-130			
Matrix Spike (2415063-MS2)				Source:	E404085-	13	Prepared: 0	4/11/24 <i>A</i>	Analyzed: 04/15/24
Gasoline Range Organics (C6-C10)	48.6	20.0	50.0	ND	97.2	70-130			
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.468		0.500		93.6	70-130			
Surrogate: Toluene-d8	0.579		0.500		116	70-130			
Matrix Spike Dup (2415063-MSD2)				Source:	E404085-	13	Prepared: 0	4/11/24 <i>A</i>	Analyzed: 04/15/24
Gasoline Range Organics (C6-C10)	46.2	20.0	50.0	ND	92.5	70-130	5.02	20	
Surrogate: Bromofluorobenzene	0.459		0.500		91.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.506		0.500		101	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			



# **QC Summary Data**

		QU N	u	ary Date	4				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	-	RDX 17 Federal 01058-0007	l Com #00	)6H			Reported:
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					4/18/2024 12:38:26PM
	Noi	nhalogenated C	Organics	by EPA 801	15D - G	RO			Analyst: EG
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415071-BLK1)							Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.32		8.00		91.5	70-130			
LCS (2415071-BS2)							Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	52.6	20.0	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.35		8.00		91.9	70-130			
Matrix Spike (2415071-MS2)				Source:	E404100-	06	Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	53.8	20.0	50.0	ND	108	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.34		8.00		91.8	70-130			
Matrix Spike Dup (2415071-MSD2)				Source:	E404100-	06	Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	50.5	20.0	50.0	ND	101	70-130	6.35	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00		93.6	70-130			



# **QC Summary Data**

		QU N		ary Date	-				
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		RDX 17 Federa 01058-0007	l Com #00	6H			Reported:
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					4/18/2024 12:38:26PM
	Nonha	alogenated Org	anics by	y EPA 8015E	) - DRO	/ORO			Analyst: NV
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2416028-BLK1)							Prepared: 0	4/15/24 A	Analyzed: 04/15/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	38.5		50.0		77.1	50-200			
LCS (2416028-BS1)							Prepared: 0	4/15/24 A	Analyzed: 04/15/24
Diesel Range Organics (C10-C28)	227	25.0	250		90.9	38-132			
Surrogate: n-Nonane	40.1		50.0		80.2	50-200			
Matrix Spike (2416028-MS1)				Source:	E404085-	06	Prepared: 0	4/15/24 A	Analyzed: 04/15/24
Diesel Range Organics (C10-C28)	221	25.0	250	ND	88.6	38-132			
Surrogate: n-Nonane	40.4		50.0		80.9	50-200			
Matrix Spike Dup (2416028-MSD1)				Source:	E404085-	06	Prepared: 0	4/15/24 A	Analyzed: 04/15/24
Diesel Range Organics (C10-C28)	227	25.0	250	ND	90.9	38-132	2.65	20	
Surrogate: n-Nonane	41.5		50.0		82.9	50-200			



# **QC Summary Data**

		QU N		ary Date					
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:	-	RDX 17 Federa 01058-0007	1 Com #00	)6H			Reported:
Carlsbad NM, 88220		Project Manager:	: (	Gilbert Moreno					4/18/2024 12:38:26PM
	Nonh	alogenated Org	anics by	y EPA 8015I	) - DRO	/ORO			Analyst: KM
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2416044-BLK1)							Prepared: 0	4/16/24 <i>A</i>	Analyzed: 04/17/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	56.3		50.0		113	50-200			
LCS (2416044-BS1)							Prepared: 0	4/16/24 A	Analyzed: 04/17/24
Diesel Range Organics (C10-C28)	321	25.0	250		128	38-132			
Surrogate: n-Nonane	59.9		50.0		120	50-200			
Matrix Spike (2416044-MS1)				Source:	E404086-	43	Prepared: 0	4/16/24 A	Analyzed: 04/17/24
Diesel Range Organics (C10-C28)	328	25.0	250	ND	131	38-132			
Surrogate: n-Nonane	54.7		50.0		109	50-200			
Matrix Spike Dup (2416044-MSD1)				Source:	E404086-	43	Prepared: 0	4/16/24 A	Analyzed: 04/17/24
Diesel Range Organics (C10-C28)	328	25.0	250	ND	131	38-132	0.221	20	
Surrogate: n-Nonane	56.5		50.0		113	50-200			



# **QC Summary Data**

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WPX Energy - Carlsbad		Project Name:	F	RDX 17 Federa	l Com #00	6H			Reported:
5315 Buena Vista Dr		Project Number:	0	1058-0007					•
Carlsbad NM, 88220		Project Manager:	(	Gilbert Moreno					4/18/2024 12:38:26PM
		Anions	by EPA	300.0/9056A	۱.				Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415048-BLK1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	ND	20.0							
LCS (2415048-BS1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2415048-MS1)				Source:	E404076-(	)1	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	18900	400	250	17600	524	80-120			M4
Matrix Spike Dup (2415048-MSD1)				Source:	E404076-(	)1	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	18800	400	250	17600	468	80-120	0.750	20	M4



# **QC Summary Data**

			•						
WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		RDX 17 Federa 01058-0007	l Com #00	6H			Reported:
Carlsbad NM, 88220		Project Manager		Gilbert Moreno					4/18/2024 12:38:26PM
		Anions	by EPA	300.0/9056A	•				Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415066-BLK1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	ND	20.0							
LCS (2415066-BS1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	256	20.0	250		102	90-110			
Matrix Spike (2415066-MS1)				Source:	E404085-	03	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	1910	40.0	250	1750	66.8	80-120			M4
Matrix Spike Dup (2415066-MSD1)				Source:	E404085-	03	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	1980	40.0	250	1750	93.2	80-120	3.39	20	

QC Summary Report Comment:

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



WPX Energy - Carlsbad	Project Name:	RDX 17 Federal Com #006H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	04/18/24 12:38

M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.

S3 Surrogate spike recovery was outside acceptance limits. LCS spike recovery was acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

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

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



Reproject Information

lient: \	VPX Energ	y Permia	n, LLC.		Bill To	)	1 Martin		Lab	Use	Only	У	_			TA	We can see he will be	EPA P	rogram
roject:	RDX 17 Fe	deral Co	m #006H		Attention: Jim Raley		Lab W	'O#		-	Job	Numb	er	1D	2D	3D	Standard	CWA	SDWA
roject	Manager:	Gilbert N	loreno		Address: 5315 Buena Vist	a Dr.	Lab W	04	28	5	010	Numb	0007				5 Days TAT		
ddress	: 13000 W	County	Rd 100		City, State, Zip: Carlsbad,	NM, 88220						is and			-				RCRA
ity, Sta	te, Zip_Oo	dessa, TX,	79765		Phone: 575-885-7502														
hone:	132-305-64	414			Email: jim.raley@dvn.cor	n		3015										State	
mail: D	evon-tear	n@etech	env.com		WBS: EE-159309.01.ABD			by 8									NM CO	UT AZ	TX
					Incident ID: nRM2019548	894		ORO											
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ollecte	d by: Edyt	e Konan					Û	d/o	8021	826	601(	= 30				1¥	×		
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11:00	04.09.24	s	1		FS01	I	4'					x					Testing	backfill for	RDX 16-9
11:10	04.09.24	s	1		FS02	2	4'					x							
11:20	04.09.24	S	1		FS03	3	4'					x							
11:30	04.09.24	S	1		FS04	V	4'	-	-	-		x	-	-	-				
11:40	04.09.24	S	1		FS05	5	4'	-	-			x	-		-				
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12:00	04.09.24	S	1		FS07	7	4'	-	-	-		x	-		-				
12:10	04.09.24	S	1		FS08	8	4'	-		-		x			-		_		
12:20	04.09.24	S	1		FS09	9	4'					x							
12:30	04.09.24	S	1		FS10	(0	4'					x							
dditio	al Instruc	tions:																	
field sam	pler), attest to	the validity	and authentic	city of this sample. I a	m aware that tampering with or intent	ionally mislabelling the san	ple locatio	on,					-				eceived on ice the da		
te or tim	of collection	is considere	d fraud and m	nay be grounds for lega	al action. Sampled by:	ЕК				_	receiv	ed packed	d in ice a				less than 6 °C on sul	osequent days	•
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	applicable o	nly to those	e samples re	eceived by the labor	atory with this COC. The liability o	the laboratory is limite	d to the ar	mount	paid f	or on	the re	eport.					nvi		

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Reference of the second second

ct Manager: Gilbert Moreno       Address: 3315 Buena Vista Dr.       E       Construction of the second of the s			y Permia			1.	1		Bil	II To			1. Surger	-		Use	1.000			-			TA				rogram
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State, ZIP, Odessa, TX, YP465       Phone: 575 485-7502         Exa2:305-6414       Email: lim.rale@dm.com         W32:05-6414       Email: lim.rale@dm.com         W32:05-6414       Email: lim.rale@dm.com         W35:16:15:00:00.LABD       Inc.dem.lip.int.rale@dm.com         Inc.dem.lip.int.rale@dm.com       W35:16:15:00:00.LABD         Inc.dem.lip.int.rale@dm.com       W35:16:10:00:00:00:00:00:00:00:00:00:00:00:00:													EG	04	B									5 Days	TAT		
e: 432:305-6414       Email: Imraley@dvn.com       Imraley@dvn.com       Imraley@dvn.com         i: Devon-team@etechenv.com       Imraley@dvn.com       Imraley@dvn.com       Imraley@dvn.com         I: Devon-team@ete										ad, NM	, 88220	)			-	Ar	nalysi	s and	Meth	od					+		RCRA
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D0       04.09.24       S       1       FS19       19       4'       X       Image: Construction of the stampe in the stamp	13:50	04.09.24	S	1			F	S18					4'	-				x									
0       04.09.24       S       1       FS20       20       4 <sup>1</sup> X       Image: Construction of the sample of the samp	14:00	04.09.24	S	1			F	\$19					4'	1				x		+							
cional Instructions:         Sampler, attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, time of collection is considered fraud and may be grounds for legal action.       Sampled by: Ex       Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.         uished by: (Signature)       Date       Time       Lab Use Only         uished by: (Signature)       Date       Time       Lab Use Only         uished by: (Signature)       Date       Time       Ta       Ta         uished by: (Signature)       Date       Time       Received on ice:       D/ N         uished by: (Signature)       Date       Time       Ta       Ta       Ta         uished by: (Signature)       Date       Time       Received on ice:       D/ N         uished by: (Signature)       Date       Time       Ta       Ta       Ta         uished by: (Signature)       Date       Time       NG Good       Ta       Ta       Ta         uished by: (Signature)       Date       Time       Ta       Ta       Ta       Ta       Ta         uished by: (Signature)       Date       Time       Good       Ta <t< td=""><td>14:10</td><td>04.09.24</td><td>S</td><td>1</td><td></td><td></td><td>F</td><td>S20</td><td></td><td></td><td></td><td></td><td>4'</td><td>1</td><td></td><td></td><td></td><td>x</td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	14:10	04.09.24	S	1			F	S20					4'	1				x		1							
time of collection is considered fraud and may be grounds for legal action. Sampled by: EK time of collection is considered fraud and may be grounds for legal action. Sampled by: EK uished by: (Signature) uished by: (Signature) Date Time Time Date Time Date Time	dditio	nal Instruc	tions:										1	1	1	-	I		-	-				<u> </u>			
time of collection is considered traud and may be grounds for legal action.       Sampled by: EK         Lab Use Only         Lished by: (Signature)       Date       Time       Lab Use Only         Lished by: (Signature)       Date       Time       Lab Use Only         Jished by: (Signature)       Date       Time       Received by: (Signature)       Date       Time         Jished by: (Signature)       Date       Time       Received by: (Signature)       Date       Time       Avg Temp °C_4         Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other       Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA         Samples are discarded 30 days after results are reported unless other arrangements are made.       Hazardous samples will be returned to client or disposed of at the client expense.       The report for the analysis of the above est is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.											y mislabe	lling the sam	ple locatio	on,	-												
Hype       C4/10/24       [0°:00       Winhelie Gaegales       4-10-24       1000       Received on ice:       Ø/N         Jished by: (Signature)       Date       Time       Received by: (Signature)       Date       Time       Time<						5- 0-						Date	-	Time		-	-		-		12	hll	co On	alv			
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Reference Information

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Cli	Client: WPX Energy Permian, LLC. Bill To Project: RDX 17 Federal Com #006H Attention: Jim Raley					ΙΤΟ					Use	Only	1				TA	C		Program		
							Attention: Jim Raley			Lab W	0#	~		Jobl	Num	ber	1D 2	D		Standard		SDWA
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### **Envirotech Analytical Laboratory**

	1	LIIVITOLECII	Апатун	ai Laboratory	1	Printed: 4/15/2024 12:21:50PM
tructions	· Plassa taka nota of any NO abaskmarks	Sample	Receipt Ch	ecklist (SRC)		
	: Please take note of any NO checkmarks. no response concerning these items within 24 hours of th	e date of this not	tice, all the sar	nples will be analyzed as requ	lested.	
Client:	WPX Energy - Carlsbad	Date Received:	04/11/24 08	00	Work Order ID:	E404085
Phone:	(539) 573-4018	Date Logged In:	04/10/24 16	:02	Logged In By:	Jessica Liesse
Email:	devon-team@etechenv.com	Due Date:	04/17/24 17	:00 (4 day TAT)		
Chain of	Custody (COC)					
1. Does t	he sample ID match the COC?		Yes			
	he number of samples per sampling site location mate	h the COC	Yes			
3. Were s	amples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was th	e COC complete, i.e., signatures, dates/times, request	ed analyses?	Yes	culturi <u>countri</u>		
	all samples received within holding time?		Yes			
	Note: Analysis, such as pH which should be conducted in t i.e, 15 minute hold time, are not included in this disucssion				Commen	ts/Resolution
Sample '	<u>Furn Around Time (TAT)</u>					
6. Did th	e COC indicate standard TAT, or Expedited TAT?		Yes			
Sample (	<u>Cooler</u>					
7. Was a	sample cooler received?		Yes			
8. If yes,	was cooler received in good condition?		Yes			
9. Was th	e sample(s) received intact, i.e., not broken?		Yes			
10. Were	custody/security seals present?		No			
11. If yes	s, were custody/security seals intact?		NA			
12. Was th	he sample received on ice? If yes, the recorded temp is 4°C, i. Note: Thermal preservation is not required, if samples are minutes of sampling		Yes			
13. If no	visible ice, record the temperature. Actual sample to	emperature: 4 <sup>c</sup>	<u>°C</u>			
Sample	<u>Container</u>					
	queous VOC samples present?		No			
15. Are V	/OC samples collected in VOA Vials?		NA			
16. Is the	head space less than 6-8 mm (pea sized or less)?		NA			
17. Was :	a trip blank (TB) included for VOC analyses?		NA			
18. Are r	non-VOC samples collected in the correct containers?		Yes			
19. Is the	appropriate volume/weight or number of sample containe	rs collected?	Yes			
Field La	<u>bel</u>					
20. Were	field sample labels filled out with the minimum inform	mation:				
	ample ID?		Yes			
	Date/Time Collected?		Yes			
	Collectors name? Preservation		Yes			
-	the COC or field labels indicate the samples were pre	served?	No			
	ample(s) correctly preserved?	serveu:	NA			
	filteration required and/or requested for dissolved me	etals?	No			
	ase Sample Matrix					
	the sample have more than one phase, i.e., multiphase		No			
27. If yes	s, does the COC specify which phase(s) is to be analyz	xed?	NA			
	ract Laboratory					
	amples required to get sent to a subcontract laboratory a subcontract laboratory specified by the client and if s		No NA S	ubcontract Lab: NA		
Climet I						

**Client Instruction** 

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







5796 U.S. Hwy 64 Farmington, NM 87401

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





# envirotech

**Practical Solutions for a Better Tomorrow** 

# **Analytical Report**

WPX Energy - Carlsbad

Project Name: RDX 17 Federal Com #006H

Work Order: E404087

Job Number: 01058-0007

Received: 4/11/2024

Revision: 2

Report Reviewed By:

Walter Hinchman Laboratory Director 4/17/24

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported. Date Reported: 4/17/24

Gilbert Moreno 5315 Buena Vista Dr Carlsbad, NM 88220 C

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Project Name: RDX 17 Federal Com #006H Workorder: E404087 Date Received: 4/11/2024 8:00:00AM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/11/2024 8:00:00AM, under the Project Name: RDX 17 Federal Com #006H.

The analytical test results summarized in this report with the Project Name: RDX 17 Federal Com #006H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

Walter Hinchman Laboratory Director Office: 505-632-1881 Cell: 775-287-1762 whinchman@envirotech-inc.com

Field Offices:

Southern New Mexico Area Lynn Jarboe Laboratory Technical Representative Office: 505-421-LABS(5227) Cell: 505-320-4759 ljarboe@envirotech-inc.com Raina Schwanz Laboratory Administrator Office: 505-632-1881 rainaschwanz@envirotech-inc.com Alexa Michaels Sample Custody Officer Office: 505-632-1881 labadmin@envirotech-inc.com

Michelle Golzales Client Representative Office: 505-421-LABS(5227) Cell: 505-947-8222 mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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#### **Sample Summary**

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		Sample Sum	mai y		
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	RDX 17 Federal C 01058-0007 Gilbert Moreno	om #006H	<b>Reported:</b> 04/17/24 13:41
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 0-4'	E404087-01A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
SW02 0-4'	E404087-02A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
SW03 0-4'	E404087-03A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.
SW04 0-4'	E404087-04A	Soil	04/09/24	04/11/24	Glass Jar, 2 oz.



	S	ample D	ata			
WPX Energy - Carlsbad	Project Name	: RD2	K 17 Federal	Com #006H		
5315 Buena Vista Dr	Project Numb	ber: 0105	58-0007			Reported:
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moreno			4/17/2024 1:41:47PM
		SW01 0-4'				
		E404087-01				
		Reporting				
Analyte	Result	Limit	Diluti	on Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	А	nalyst: RAS		Batch: 2415068
Benzene	ND	0.0250	1	04/11/24	04/12/24	
Ethylbenzene	ND	0.0250	1	04/11/24	04/12/24	
Toluene	ND	0.0250	1	04/11/24	04/12/24	
o-Xylene	ND	0.0250	1	04/11/24	04/12/24	
p,m-Xylene	ND	0.0500	1	04/11/24	04/12/24	
Total Xylenes	ND	0.0250	1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		88.8 %	70-130	04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/11/24	04/12/24	
Surrogate: Toluene-d8		99.0 %	70-130	04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	А	nalyst: RAS		Batch: 2415068
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		88.8 %	70-130	04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-130	04/11/24	04/12/24	
Surrogate: Toluene-d8		99.0 %	70-130	04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	А	nalyst: NV		Batch: 2416043
Diesel Range Organics (C10-C28)	ND	25.0	1	04/16/24	04/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/16/24	04/16/24	
Surrogate: n-Nonane		77.5 %	50-200	04/16/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	А	.nalyst: IY		Batch: 2415048
Chloride	375	20.0	1	04/11/24	04/13/24	



	D	ample D	ucu				
WPX Energy - Carlsbad	Project Name	: RD	X 17 Feder	ral Com	#006H		
5315 Buena Vista Dr	Project Numb	oer: 010	58-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moren	10			4/17/2024 1:41:47PM
		SW02 0-4'					
		E404087-02					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RAS		Batch: 2415068
Benzene	ND	0.0250		1	04/11/24	04/12/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/12/24	
Toluene	ND	0.0250		1	04/11/24	04/12/24	
p-Xylene	ND	0.0250		1	04/11/24	04/12/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/12/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		89.8 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		97.0 %	70-130		04/11/24	04/12/24	
Surrogate: Toluene-d8		98.7 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	: RAS		Batch: 2415068
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		89.8 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		97.0 %	70-130		04/11/24	04/12/24	
Surrogate: Toluene-d8		98.7 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst	: NV		Batch: 2416043
Diesel Range Organics (C10-C28)	ND	25.0		1	04/16/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/16/24	04/16/24	
Surrogate: n-Nonane		71.7 %	50-200		04/16/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415048
Chloride	88.1	20.0		1	04/11/24	04/13/24	



	<b>D</b>	ampie D	uuu				
WPX Energy - Carlsbad	Project Name	: RD2	K 17 Feder	ral Com	#006H		
5315 Buena Vista Dr	Project Numb	er: 010	58-0007				Reported:
Carlsbad NM, 88220	Project Manag	ger: Gilb	ert Moren	0			4/17/2024 1:41:47PM
		SW03 0-4'					
		E404087-03					
		Reporting					
Analyte	Result	Limit	Di	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	RAS		Batch: 2415068
Benzene	ND	0.0250		1	04/11/24	04/12/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/12/24	
Toluene	ND	0.0250		1	04/11/24	04/12/24	
p-Xylene	ND	0.0250		1	04/11/24	04/12/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/12/24	
Fotal Xylenes	ND	0.0250		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		87.8 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130		04/11/24	04/12/24	
Surrogate: Toluene-d8		97.3 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	RAS		Batch: 2415068
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		87.8 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		106 %	70-130		04/11/24	04/12/24	
urrogate: Toluene-d8		97.3 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst	NV		Batch: 2416043
Diesel Range Organics (C10-C28)	ND	25.0		1	04/16/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/16/24	04/16/24	
Surrogate: n-Nonane		73.3 %	50-200		04/16/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415048
Chloride	102	20.0		1	04/11/24	04/13/24	


### Sample Data

	D D	ample D	uu				
WPX Energy - Carlsbad	Project Name	: RD	K 17 Feder	ral Com	#006H		
5315 Buena Vista Dr	Project Numb	ber: 010	58-0007				Reported:
Carlsbad NM, 88220	Project Mana	ger: Gilb	ert Moren	0			4/17/2024 1:41:47PM
		SW04 0-4'					
		E404087-04					
		Reporting					
Analyte	Result	Limit	Dil	lution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg		Analyst	: RAS		Batch: 2415068
Benzene	ND	0.0250		1	04/11/24	04/12/24	
Ethylbenzene	ND	0.0250		1	04/11/24	04/12/24	
Toluene	ND	0.0250		1	04/11/24	04/12/24	
p-Xylene	ND	0.0250		1	04/11/24	04/12/24	
o,m-Xylene	ND	0.0500		1	04/11/24	04/12/24	
Total Xylenes	ND	0.0250		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		87.3 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130		04/11/24	04/12/24	
Surrogate: Toluene-d8		93.9 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg		Analyst	: RAS		Batch: 2415068
Gasoline Range Organics (C6-C10)	ND	20.0		1	04/11/24	04/12/24	
Surrogate: Bromofluorobenzene		87.3 %	70-130		04/11/24	04/12/24	
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130		04/11/24	04/12/24	
Surrogate: Toluene-d8		93.9 %	70-130		04/11/24	04/12/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg		Analyst	: NV		Batch: 2416043
Diesel Range Organics (C10-C28)	ND	25.0		1	04/16/24	04/16/24	
Dil Range Organics (C28-C36)	ND	50.0		1	04/16/24	04/16/24	
Surrogate: n-Nonane		79.5 %	50-200		04/16/24	04/16/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg		Analyst	: IY		Batch: 2415048
Chloride	87.3	20.0		1	04/11/24	04/13/24	



# **QC Summary Data**

WPX Energy - Carlsbad 5315 Buena Vista Dr		Project Name: Project Number:		OX 17 Federal 058-0007	Com #00	6H			Reported:
Carlsbad NM, 88220		Project Manager:	Gi	lbert Moreno				4	/17/2024 1:41:47PM
		Volatile Organic	Compo	unds by EPA	A 82601	B			Analyst: RAS
Analyte		Reporting	Spike	Source		Rec		RPD	
5	Result	Limit	Level	Result	Rec	Limits	RPD	Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415068-BLK1)							Prepared: 04	4/11/24 Ana	lyzed: 04/12/24
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.407		0.500		81.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.511		0.500		102	70-130			
Surrogate: 1,2-Dichloroeinane-u4 Surrogate: Toluene-d8	0.532		0.500		102	70-130			
-	0.552		0.500		100	,0-150	_		
LCS (2415068-BS1)							Prepared: 04	4/11/24 Ana	lyzed: 04/13/24
Benzene	2.40	0.0250	2.50		96.2	70-130			
Ethylbenzene	2.23	0.0250	2.50		89.1	70-130			
Toluene	2.32	0.0250	2.50		92.6	70-130			
p-Xylene	2.23	0.0250	2.50		89.3	70-130			
p,m-Xylene	4.48	0.0500	5.00		89.6	70-130			
Total Xylenes	6.71	0.0250	7.50		89.5	70-130			
Surrogate: Bromofluorobenzene	0.477		0.500		95.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.541		0.500		108	70-130			
Surrogate: Toluene-d8	0.482		0.500		96.4	70-130			
Matrix Spike (2415068-MS1)				Source: E	2404087-	03	Prepared: 04	4/11/24 Ana	lyzed: 04/13/24
Benzene	2.47	0.0250	2.50	ND	98.8	48-131			
Ethylbenzene	2.29	0.0250	2.50	ND	91.6	45-135			
Toluene	2.46	0.0250	2.50	ND	98.2	48-130			
p-Xylene	2.45	0.0250	2.50	ND	98.2	43-135			
p,m-Xylene	4.93	0.0500	5.00	ND	98.6	43-135			
Total Xylenes	7.38	0.0250	7.50	ND	98.5	43-135			
Surrogate: Bromofluorobenzene	0.481		0.500		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.541		0.500		108	70-130			
Surrogate: Toluene-d8	0.501		0.500		100	70-130			
Matrix Spike Dup (2415068-MSD1)				Source: <b>E</b>	2404087-	03	Prepared: 04	4/11/24 Ana	lyzed: 04/13/24
Benzene	2.41	0.0250	2.50	ND	96.6	48-131	2.29	23	
Ethylbenzene	2.28	0.0250	2.50	ND	91.0	45-135	0.701	27	
Toluene	2.38	0.0250	2.50	ND	95.0	48-130	3.33	24	
p-Xylene	2.45	0.0250	2.50	ND	97.9	43-135	0.326	27	
o,m-Xylene	4.89	0.0500	5.00	ND	97.9	43-135	0.713	27	
Fotal Xylenes	7.34	0.0250	7.50	ND	97.9	43-135	0.584	27	
Surrogate: Bromofluorobenzene	0.505		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.542		0.500		108	70-130			
surrogate: 1,2-Dicnioroetnane-a4 Surrogate: Toluene-d8			0.500		96.6	70-130			
	0.483								



# **QC Summary Data**

		QC DI		ary Data					
WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220		Project Name: Project Number: Project Manager:	0	RDX 17 Federal 11058-0007 Gilbert Moreno	Com #00	6H			<b>Reported:</b> 4/17/2024 1:41:47PM
	N	onhalogenated O	rganics	by EPA 801	5D - Gl	RO			Analyst: RAS
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415068-BLK1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.407		0.500		81.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.511		0.500		102	70-130			
Surrogate: Toluene-d8	0.532		0.500		106	70-130			
LCS (2415068-BS2)							Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	56.7	20.0	50.0		113	70-130			
Surrogate: Bromofluorobenzene	0.457		0.500		91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.509		0.500		102	70-130			
Surrogate: Toluene-d8	0.552		0.500		110	70-130			
Matrix Spike (2415068-MS2)				Source: H	2404087-0	03	Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	60.3	20.0	50.0	ND	121	70-130			
Surrogate: Bromofluorobenzene	0.476		0.500		95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.480		0.500		95.9	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			
Matrix Spike Dup (2415068-MSD2)				Source: H	2404087-0	03	Prepared: 0	4/11/24 A	analyzed: 04/13/24
Gasoline Range Organics (C6-C10)	59.6	20.0	50.0	ND	119	70-130	1.22	20	
Surrogate: Bromofluorobenzene	0.467		0.500		93.3	70-130			
surrogate: Bromojtuorobenzene									
Surrogate: 1,2-Dichloroethane-d4	0.502		0.500		100	70-130			



# **QC Summary Data**

WPX Energy - Carlsbad		Project Name:	RI	OX 17 Federa	l Com #00	6H			Reported:
5315 Buena Vista Dr		Project Number:	01	058-0007					-
Carlsbad NM, 88220		Project Manager	: Gi	lbert Moreno					4/17/2024 1:41:47PM
	Nonha	alogenated Org	ganics by	EPA 8015I	) - DRO	/ORO			Analyst: NV
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2416043-BLK1)							Prepared: 04	4/16/24 A	analyzed: 04/16/24
Diesel Range Organics (C10-C28)	ND	25.0							
Dil Range Organics (C28-C36)	ND								
	ND	50.0							
Surrogate: n-Nonane	41.3	50.0	50.0		82.7	50-200			
5		50.0	50.0		82.7	50-200	Prepared: 04	4/16/24 A	analyzed: 04/16/24
LCS (2416043-BS1)		25.0	50.0		82.7	50-200	Prepared: 04	4/16/24 A	analyzed: 04/16/24
LCS (2416043-BS1) Diesel Range Organics (C10-C28)	41.3						Prepared: 04	4/16/24 A	analyzed: 04/16/24
LCS (2416043-BS1) Diesel Range Organics (C10-C28) Surrogate: n-Nonane	<i>41.3</i> 254		250		102	38-132			analyzed: 04/16/24 analyzed: 04/16/24
Surrogate: n-Nonane LCS (2416043-BS1) Diesel Range Organics (C10-C28) Surrogate: n-Nonane LCS Dup (2416043-BSD1) Diesel Range Organics (C10-C28)	<i>41.3</i> 254		250		102	38-132			



### **QC Summary Data**

				<i>J</i> –					
WPX Energy - Carlsbad		Project Name:		RDX 17 Federa	l Com #00	6H			Reported:
5315 Buena Vista Dr		Project Number	:	01058-0007					
Carlsbad NM, 88220		Project Manager	r:	Gilbert Moreno					4/17/2024 1:41:47PM
		Anions	by EPA	300.0/9056	4				Analyst: IY
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	Notes
Blank (2415048-BLK1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	ND	20.0							
LCS (2415048-BS1)							Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2415048-MS1)				Source:	E404076-	01	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	18900	400	250	17600	524	80-120			M4
Matrix Spike Dup (2415048-MSD1)				Source:	E404076-	01	Prepared: 0	4/11/24 A	nalyzed: 04/12/24
Chloride	18800	400	250	17600	468	80-120	0.750	20	M4

QC Summary Report Comment:

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



WPX Energy - Carlsbad	Project Name:	RDX 17 Federal Com #006H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Gilbert Moreno	04/17/24 13:41

M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

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

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



Reproject Information

Received by OCD: 7/19/2024 8:47:33 AM

lient: W	PX Energ	y Permia	in, LLC.			-	Bill To				Lab	Use	Only	1			TA		EPA P	rogram
			m #006H		Att	ention: Jim Raley	1		Lab W E 4	0#	0	2	Job	Numb	er	1D 2D	3D	Standard	CWA	SDWA
	Aanager:				Ad	dress: 5315 Buen	a Vista Dr.		EY	040	00			58-				5 Days TAT		
	13000 W					y, State, Zip: Carls		0		-	_	An	alysis	s and I	Method	1	-			RCRA
	e, Zip_Oo		79765			one: 575-885-750			1	5		-						here all		
	32-305-6	2743 X				ail: jim.raley@dv				801									State	
imail: De	evon-tear	n@etech	env.com			3S: EE-159309.01.				O by							-	NM CO	UT AZ	TX
					Inc	ident ID: nRM201	19548894		1	/OR(										
										DRO	021	60	10	300.0		MN	TX			
	by: Edyt	e Konan						1 1.1	(ft.)	RO/I	oy 8(	y 82	s 60.	de 3				×		
Time Sampled	Date Sampled	Matrix	No. of Containers		_	Sample ID		Lab Number	Depth(ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride :		BGDOC	GDOC		Remarks	5
15:00	04.09.24	S	1			SW01		1	0-4'					x				Testin	g backfill for	RDX 16-9
15:10	04.09.24	S	1			SW02		2	0-4'					x						
15:20	04.09.24	S	1			SW03		3	0-4'					x						
15:30	04.09.24	S	1			SW04		4	0-4'					x				1		
												-	-	-						
								-	-						1					
						0411012	2M		1											
		-		-	/					-		-	-	-			-			
				/									_	_	_					
		/					_						-		1					
/	/																			
Addition	al Instruc	tions:							-	-										
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	by OCD: //19/2024 8:4/:33 AM	Envirotech	Analytic	al Laboratory	]	<i>Page 81 of</i> Printed: 4/15/2024 12:42:28PM
		Sample	Receipt Ch	ecklist (SRC)		
	: Please take note of any NO checkmarks. e no response concerning these items within 24 hours of t	he date of this not	tice, all the sam	ples will be analyzed as req	uested.	
Client:	WPX Energy - Carlsbad	Date Received:	04/11/24 08:0	00	Work Order ID:	E404087
Phone:	(539) 573-4018	Date Logged In:	04/10/24 16:1	14	Logged In By:	Jessica Liesse
mail:	devon-team@etechenv.com	Due Date:	04/17/24 17:0	00 (4 day TAT)		
Chain o	f Custody (COC)					
	he sample ID match the COC?		Yes			
2. Does t	he number of samples per sampling site location mat	ch the COC	Yes			
3. Were	samples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was tl	ne COC complete, i.e., signatures, dates/times, reques	ted analyses?	Yes			
5. Were	all samples received within holding time? Note: Analysis, such as pH which should be conducted in i.e, 15 minute hold time, are not included in this disucssic		Yes		Commen	ts/Resolution
Sample '	Turn Around Time (TAT)					
	e COC indicate standard TAT, or Expedited TAT?		Yes			
Sample	Cooler					
	sample cooler received?		Yes			
	was cooler received in good condition?		Yes			
. Was th	ne sample(s) received intact, i.e., not broken?		Yes			
	custody/security seals present?		No			
	s, were custody/security seals intact?					
	he sample received on ice? If yes, the recorded temp is 4°C,		NA Yes			
2 Ifma	Note: Thermal preservation is not required, if samples are minutes of sampling visible ice, record the temperature. Actual sample		oc.			
		temperature. <u>4</u>	<u> </u>			
	Container		N.			
	aqueous VOC samples present?		No NA			
	VOC samples collected in VOA Vials?		NA			
	e head space less than 6-8 mm (pea sized or less)?					
	a trip blank (TB) included for VOC analyses?		NA			
	non-VOC samples collected in the correct containers?		Yes			
	appropriate volume/weight or number of sample contain	ers conected?	Yes			
Field La		mation				
	field sample labels filled out with the minimum info Sample ID?	mation:	Yes			
	Date/Time Collected?		Yes			
	Collectors name?		Yes			
Sample	Preservation					
21. Does	the COC or field labels indicate the samples were pr	eserved?	No			
	ample(s) correctly preserved? o filteration required and/or requested for dissolved m	etals?	NA No			
	ase Sample Matrix					
	the sample have more than one phase, i.e., multiphas	se?	No			
	s, does the COC specify which phase(s) is to be analy		NA			
	ract Laboratory					
	samples required to get sent to a subcontract laborator	<b>w</b> 9	No			
	a subcontract laboratory specified by the client and if	•		hoontract I als NIA		
29. was	a subcontract laboratory specified by the chefit and fi	50 WII0?	INA SI	ubcontract Lab: NA		

**Client Instruction** 

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



# APPENDIX F

# **BLM Seed Mixture for Shallow Sites**

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



#### Seed Mixture 3, for Shallow Sites

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

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

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

Species	<u>lb/acre</u>
Plains Bristlegrass (Setaria macrostachya)	1.0
Green Sprangletop (Leptochloa dubia)	2.0
Sideoats Grama (Bouteloua curtipendula)	5.0

\*Pounds of pure live seed:

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

# APPENDIX G

# HoldAll® Operating Manual

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











**Plants & Flowers** 

757860

Grasses & Lawns



**Fruits & Veggies** 



**Trees & Shrubs** 

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757860



# SOIL TEST KIT

# **Tests Your Soil for a Healthy Garden**

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

# PREPARING YOUR SOIL SAMPLES

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

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

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

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

#### pH TEST:

1. Remove cap from the green capped tube.

2. Fill tube with soil to the first line.

**3.** Carefully open a green capsule and pour powder into the tube.

4. Add water (preferably distilled) to the fourth line.

5. Cap tube and shake thoroughly.

**6.** Allow soil to settle and color to develop for about a minute.

**7.** Compare color of solution to the pH color chart. Repeat for remaining capsules.



#### NITROGEN, PHOSPHORUS & POTASH TESTS:

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

Nitrogen	Phosphorous	Potash
High	High	High
Medium	Medium	Medium
Low	Low	Low
Very Low	Very Low	Very Low

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

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

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

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

pH 7.5 - Alkaline pH 7.0 - Neutral pH 6.5 - Slight A pH 6.0 - Acid pH 5.5 - Acid

pH 5.0 - Very Acid

pH 4.5 - Very Acid

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Raising and lowering pH is not an exact science & most plants have a reasonably wide tolerance, certainly to within 1 pH point. Consult the pH Preference List and you will see that the majority can manage well on a pH around 6.5 but some need an alkaline soil and some a particularly acid soil. Altering pH takes time so do not expect rapid changes; rather, work steadily towards giving a plant its ideal conditions.

# ADJUSTING pH

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

### SOIL TYPES

Sandy Soils: A light, coarse soil comprised of crumbling and alluvial debris. Loam Soils: A medium friable soil, consisting of a blend of coarse (sand) alluvium and fine (clay) particles mixed within fairly broad limits with a little lime and humus. Clay Soils: A heavy, clinging, impermeable is best to start in the Fall and check progress in the Spring. After working to adjust your soil, retest for pH level in 40-60 days. If results are still significantly off, retreat your soil, not exceeding recommended application levels. Allow one month to pass between adding lime and adding fertilizers.

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

# **ADJUSTING SOIL pH - HOW MUCH TO APPLY**

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

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

#### FEEDING PRIOR TO PLANTING

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

TEST RESULTS	Very	1000	A. 17 198 1	5.3
Nitrogen Fertilizers (%N)	Low	Low	Medium	High
Dried Blood (11%)	36	19	6	N/A
Nitrate of Soda (16%)	27	14	3	N/A.
Phosphate Fertilizers (%P)				
Bone Meal (19%)	27	14	6	N/A.
Triple Superphosphate (46%)	10.25	5.25-5.5	2.25	N/A
Potash Fertilizers (%K)				
Muriate of Potash (60%)	8.75-9	4.75-5	2.25-2.5	N/A
Amounts listed are ounces per 100 square feet (O	inces referred to are by weight)			

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

#### FEEDING ESTABLISHED PLANTS AND BEDS

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

#### **RECOMMENDATIONS FOR N, P AND K RESULTS**

	Very Low			Low			Medium		
	N	P	К	N	P	K	Ν	P	K
Lawn	22.0-22.5	0.75-1.0	4.75-5.0	14.0-14.5	1.0-1.5	2.25-2.5	3.75-4.0	0	0
Fruit	14.0-14.5	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Flower	14.0-14.25	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Shrubs (flowering)	14.0-14.25	8.25-8.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	1.0-1.25	4.75-5.0
Shrubs (foliage)	22.0-22.5	10.5-10.75	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
Veggies (root)	14.0-14.25	12.0-12.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	3.0	2.25-2.5
Veggies (leafy)	28.25-29.0	10.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	7.75-8.0	2.25	2.25-2.5
Tree	14.0-14.5	10.25	8.75-9.0	7.75-8.0	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
General Feed	22.0-22.5	8.25-8.5	8.75-9.0	10.5-11.0	4.0-4.25	4.75-5.0	3.75-4.0	1.0-1.25	2.25-2.5

	High			
	N	P	K	
Lawn	N/A	N/A	N/A	
Fruit	N/A	N/A	N/A	
Flower	N/A	N/A	N/A	
Shrubs (flowering)	N/A	N/A	N/A	
Shrubs (foliage)	N/A	N/A	N/A	
Veggies (root)	N/A	N/A	N/A	
Veggies (leafy)	N/A	N/A	N/A	
Tree	N/A	N/A	N/A	
General Feed	N/A	N/A	N/A	

The recommendations are based on the following fertilizers sources: Nitrate of Soda (16% N), Triple Superphosphate (46% P2O5) and Muriate of Potassium (60% K2O). The amounts listed are in oz. /100 sq. ft. (Ounces referred to are by weight, not volume.) If you wish to use other fertilizer, simply check the package for the percentage of nutrients for N, P, & K and adjust the application level accordingly.

#### SPECIAL RECOMMENDATIONS FOR LAWNS

For a new lawn, pay special attention to soil preparation before planting. Proper soil preparation for any size lawn will have a significant impact on the amount of water and care it demands in the future. Till the soil to a depth of at least 12' and incorporate plenty of organic material (9' or more). Test your soil for pH and adjust to the levels recommended on pH Preference List for your type of grass. Refer to the Adjusting Soil pH chart for recommended lime or sulfate applications. For established lawns, Nitrogen is the most essential nutrient to promote lush growth and deep, green color. Phosphorus and Potassium, in lesser quantilies, are also important for strong root formation and growth. Compound fertilizers will supply all 3 nutrients, or you can select an individual fertilizer, such as Nitrate of Soda. The following chart gives recommended application levels specifically for lawns, based on your Nitrogen soil test results.

#### **RECOMMENDATIONS FOR LAWNS**

Fertilzer Type	Very Low	Low
24-4-4	4.0 lbs.	2.0 lbs.
24-3-4	3.1 lbs.	1.55 lbs.
30-4-4	3,0 lbs.	1.5 lbs.
	Medium	High
	meann	nign
24-4-4	1.0 lbs.	N/A
24-4-4 24-3-4		

Amounts listed are pounds per 1000 square feet.

#### **SAFETY & HYGIENE**

Dispose of test solutions by rinsing down the sink. Empty gelatin capsules should be disposed of immediately with household waste. Wash the test tubes and caps in warm, soapy water immediately after each use. Make sure any sediment or color staining is removed. Rinse well and dry. Each bag of capsules should be stored inside the blister, Fit the caps on each test tube. Place all components back into the package. The blister pack has been specially designed to be reused as a storage container. Store your kit in clean, dry conditions, indoors. The powders are safe in normal domestic terms but like all chemicals and pharmaceuticals, they should be put away and kept out of reach of children. Try to avoid touching the powders. Always wash your hands thoroughly after making your tests. Do not eat, drink or smoke while using the soil test kit. Keep powders away from food, drink and animal feed. If taken internally, drink copious amounts of water and seek medical advice.

#### CAUTIONS

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

#### Plant pH Preference List

NAME	рН	NAME
FRUIT	E0 6E	VEGETABLES AND
APPLE APRICOT	5.0 - 6.5 6.0 - 7.0	SAGE SHALLOT
AVOCADO	6.0 - 7.5	SORGHUM
BANANA	5.0 - 7.0	SOYBEAN
BLACKBERRY	5.0 - 6.0	SPEARMINT
BLUEBERRY	4.0 - 6.0	SPINACH
CANTALOUPE	6.5 - 7.5	SWEDE
CHERRY	6.0 - 7.5	THYME
CRANBERRY	5.5 - 6.5	TOMATO
CURRANT: Black	6.0 - 8.0	TURNIP
Red	5.5 - 7.0	WATER CRESS
White	6.0 - 8.0	HOUSE and GREENHO ABUTILON
DAMSON GOOSEBERRY	6.0 - 7.5 5.0 - 6.5	ACORUS
GRAPEVINE	6.0 - 7.0	AECHMEA
GRAPEFRUIT	6.0 - 7.5	AFRICAN VIOLET
HAZELNUT	6.0 - 7.0	AGLAONEMA
HOP	6.0 - 7.5	AMARYLIS
HUCKLEBERRY	4.0 - 6.0	ANTHURIUM
LEMON	6.0 - 7.0	APHELANDRA
LYCHEE	6.0 - 7.0	ARAUCARIA
MANGO	5.0 - 6.0	ASPARAGUS FERN
MELON	5.5 - 6.5	ASPIDISTRA
MULBERRY	6.0 - 7.5	AZAELA
NECTARINE	6.0 - 7.5	BABY'S BREATH
PEACH	6.0 - 7.5	BABY'S TEARS
PEAR	6.0 - 7.5	BEGONIA
PINEAPPLE	5.0 - 6.0	BIRD OF PARADISE
PLUM	6.0 - 7.5	BISHOP'S CAP
POMEGRANATE	5.5 - 6.5	BLACK-EYED SUSAN
QUINCE	6.0 - 7.5	BLOOD LEAF
RASPBERRY	5.0 - 7.5	BOTTLEBRUSH
RHUBARB STRAWBERRY	5.5 - 7.0 5.0 - 7.5	BOUGAINVILLEA BOXWOOD
WATERMELON	5.5 - 6.5	BROMELIADS
VEGETABLES AND		BUTTERFLY FLOWER
ARTICHOKE	6.5 - 7.5	CACTI
ASPARAGUS	6.0 - 8.0	CALCAOLARIA
BASIL	5.5 - 6.5	CALADIUM
BEAN	6.0 - 7.5	CALLA LILY
(Runner, Broad, French)		CAMELIA
BEETROOT	6.0 - 7.5	CAMPANULA
BROCCOLI	6.0 - 7.0	CAPSICUM
BRUSSELS SPROUTS	6.0 - 7.5	CARDINAL FLOWER
CABBAGE	6.0 - 7.5	CASTOR OIL PLANT
CALABRESE	6.5 - 7.5	CANTURY PLANT
CARROT	5.5 - 7.0	CHINESE EVERGREEN
CAULIFLOWER	5.5 - 7.5	CHINESE PRIMROSE
CELERY	6.0 - 7.0	CHRISTMAS CACTUS CINERARIA
CHICORY CHINESE CABBAGE	5.0-6.5 6.0-7.5	CLERODENDRUM
CHIVES	6.0 - 7.0	CLIVIA
CORN - SWEET	5.5 - 7.0	COCKSCOMB
CRESS	6.0 - 7.0	COFFEE PLANT
COURGETTES	5.5 - 7.0	COLEUS
CUCUMBER	5.5 - 7.5	COLUMNEA
FENNEL	5.0 - 6.0	CORAL BERRY
GARLIC	5.5 - 7.5	CRASSULA
GINGER	6.0 - 8.0	CREEPING FIG
HORSERADISH	6.0 - 7.0	CROTON
KALE	6.0 - 7.5	CROWN OF THORNS
KOHLRABI	6.0 - 7.5	CUPHEA
LEEK LENTIL	6.0 - 8.0 5.5 - 7.0	CYCLAMEN CYPERUS
LETTUCE	6.0 - 7.0	DIEFFENBACHIA
MARJORAM	6.0 - 7.0	DIPLADENIA
MARROW	6.0 - 7.5	DIZGOTHECA
MILLET	6.0 - 6.5	DRACAENA
MINT	7.0 - 8.0	EASTER LILY
MUSHROOM	6.5 - 7.5	ELEPHANT'S EAR
MUSTARD	6.0 - 7.5	EPISCIA
OLIVE	5.5 - 6.5	EUONYMOUS
ONION	6.0 - 7.0	FERNS:
PAPRIKA	7.0 - 8.5	BIRD'S NEST
PARSLEY	5.0 - 7.0	BOSTON
PARSNIP	5.5 - 7.5	BUTTON
PEA	6.0 - 7.5	CHRISTMAS
PEANUT	5.0 - 6.5	CLOAK
PECAN	4.0 - 6.0	FEATHER
PEPPER	5.5 - 7.0	HART'S TONGUE
PEPPERMINT	6.0 - 7.5	HOLLY
PISTACHIO	5.0 - 6.0	MAIDENHAIR BARRITS FOOT
POTATO POTATO - SWEET	4.5 - 6.0 5.5 - 6.0	RABBITS FOOT SPLEENWORT
PUMPKIN	5.5 - 6.0	FIG
RADISH	5.5 - 7.5 6.0 - 7.0	FITTONIA
RICE	5.0 - 6.5	FREESIA
ROSEMARY	5.0 - 6.0	GARDENIA
	0.0	

S AND HEF	pH	_
	5.5 - 6.5 5.5 - 7.0 5.5 - 7.5	GEN GEF GLC
	5.5 - 6.5 5.5 - 7.5 6.0 - 7.5 5.0 - 7.0 5.5 - 7.0 5.5 - 7.5	GR/ GR/ GRE GYN HEL
ENHOUSE	5.5 - 7.0 6.0 - 8.0 PLANTS 5.5 - 6.5 5.0 - 6.5	HEN HER HIBI HOY
	5.0 - 5.5 6.0 - 7.0 5.0 - 6.0 5.5 - 6.5 5.0 - 6.0	IVY JAC JAP JAS JER
	5.0 - 6.0 5.0 - 6.0 6.0 - 8.0 4.0 - 5.5	JES KAL KAN
	4.5 - 6.0 6.0 - 7.5 5.0 - 6.0 5.5 - 7.0 6.0 - 6.5	LAN LAU LEN MIN
N	5.0 - 6.0 5.5 - 7.5 5.5 - 6.5 6.0 - 7.5 5.5 - 7.5	MOI MYF NEV NIC
ER	6.0 - 7.5 5. 0 - 7.5 6.0 - 7.5 4.5 - 6.0 6.0 - 7.0 5.0 - 6.0 6.0 - 7.0	OLE OPL ORC OXA PAL PAN PEA
R	5.0 - 6.0 5.5 - 6.5 5.0 - 6.5	PEL PEP PHII PILE PLU POE
EEN EE JS	5.0 - 6.0 6.0 - 7.5 5.0 - 6.5 5.5 - 7.0 5.0 - 6.0 5.5 - 6.5	POI POI POT PRA PUN SAN
	6.0 - 7.0 5.0 - 6.0 6.0 - 7.0 4.5 - 5.5 5.5 - 7.5 5.0 - 6.0 5.0 - 6.0	SAX SCII SHF SPA SPII SUC
IS	5.0 - 6.0 6.0 - 7.5 6.0 - 7.5 6.0 - 7.0 5.0 - 7.5 5.0 - 6.0 6.0 - 7.5 6.0 - 7.5 5.0 - 6.0	TOL TRA UME VEN WEI YUC ZEB
	6.0 - 7.0 5.0 - 6.0 6.0 - 7.0 6.0 - 8.0	ABE ACA ACA ACC
ST S	5.0 - 5.5 5.5 - 6.5 6.0 - 8.0 6.0 - 7.5 6.0 - 7.5	AGE AILA AJU ALT ALY
NGUE IR DOT RT	5.5 - 6.5 $7.0 - 8.0$ $4.5 - 6.0$ $6.0 - 8.0$ $6.0 - 7.5$ $6.0 - 7.5$ $5.0 - 6.0$ $5.5 - 6.5$ $6.0 - 7.5$ $5.0 - 6.0$	AMA ANC ANE ANE ANE ARE ARE ARE
	5.0 - 6.0	ARM

NAME	рН
HOUSE and GREENHOUSE PL	ANTS
GENISTA GERANIUM	6.5 - 7.5 6.0 - 8.0
GLOXINIA	5.5 - 6.5
BRAPE IVY	5.0 - 6.5
GRAPE HYACINTH	6.0 - 7.5
SYNURA	5.5 - 6.5 5.5 - 6.5
EDERA (IVY)	6.0 - 8.0
IELIOTROPIUM	5.0 - 6.0
ENS AND CHICKENS	6.0 - 7.0 6.0 - 6.0
IBISCUS PLANT	6.0 - 8.0
IOYA	5.0 - 6.5
MPATIENS VY TREE	5.5 - 6.5 6.0 - 7.0
ACARANDA	6.0 - 7.5
APANESE SEDGE	6.0 - 8.0
ASMINUM ERUSALEM CHERRY	5.5 - 7.0
	5.5 - 6.5 5.0 - 6.0
ALANCHOE	6.0 - 7.5
ANGAROO THORN	6.0 - 8.0
(ANGAROO VINE ANTANA	5.0 - 6.5 5.5 - 7.0
AURUS ( BAY TREE)	5.0 - 6.0
EMON PLANT	6.0 - 7.5
MMOSA	5.0 - 7.0
/IND YOUR OWN BUSINESS //ONSTERA	5.0 - 5.5 5.0 - 6.0
IVRTLE	6.0 - 8.0
EVER NEVER PLANT	5.0 - 6.0
ICODEMIA (INDOOR OAK) IORFOLK ISLAND PINE	6.0 - 8.0 5.0 - 6.0
DLEANDER	6.0 - 7.5
PLISMENUS	5.0 - 6.0
DRCHID	4.5 - 5.5
DXALIS PALMS	6.0 - 8.0 6.0 - 7.5
PANDANUS	5.0 - 6.0
PEACOCK PLANT	5.0 - 6.0
PELLIONIA PEPEROMIA	5.0 - 6.0 5.0 - 6.0
PHILODENDRON	5.0 - 6.0
PILEA	6.0 - 8.0
PLUMBAGO PODACARPUS	5.5 - 6.5 5.0 - 6.5
POINTSETTIA	6.0 - 7.5
POLYSCIAS	6.0 - 7.5
POTHOS	5.0 - 6.0
PRAYER PLANT PUNICA	5.0 - 6.0 5.5 - 6.5
ANSERIERIA	4.5 - 7.0
AXIFRAGA	6.0 - 8.0
CINDAPSUS SHRIMP PLANT	5.0 - 6.0 6.0 - 7.0
PANISH BAYONET	6.0 - 7.5
PIDER PLANT	6.0 - 7.5
SUCCULENTS	5.0 - 6.5
SYNOGONIUM OLMIEA	5.0 - 6.0 5.0 - 6.0
RADESCANTIA	5.0 - 6.0
JMBRELLA TREE	5.0 - 7.5
/ENUS FLYTRAP VEEPING FIG	4.0 - 5.0 5.0 - 6.0
UCCA	6.0 - 7.5
EBRINA	5.0 - 6.0
FLOWERS, TREES AND SHRUBS	
AND SHROBS	6.0 - 8.0
CACIA	6.0 - 8.0
CANTHUS	6.0 - 7.0
ACONITUM ADONIS	5.0 - 6.0 6.0 - 8.0
GERATUM	6.0 - 7.5
ILANTHUS	6.0 - 7.5
AJUGA ALTHEA	4.0 - 6.0 6.0 - 7.5
LYSSUM	6.0 - 7.5
MARANTHUS	6.0 - 6.5
NCHUSA	6.0 - 7.5
NDROSACE NEMONE	5.0 - 6.0 6.0 - 7.5
NTHYLLIS	5.0 - 6.0
RBUTUS	4.0 - 6.0
ARENARIA ARISTEA	6.0 - 8.0 6.0 - 7.5
RMERIA	6.0 - 7.5
RNICA	5.0 - 6.5

NAME FLOWERS, TRI	pH
AND SHRUBS	EES
ASPERULA	6.0 - 8.
ASPHODOLINE ASTER	6.0 - 8. 5.5 - 7.
AUBRITA	6.0 - 7.
AZALEA BALLOON FLOWER	4.5 - 6.
BAYBERRY	4.0 - 6.
BERGENIA	6.0 - 7.
BLEEDING HEART BLUEBELL	6.0 - 7. 6.0 - 7.
BROOM	5.0 - 6.
BUDDLEIA	6.0 - 7.
BUPHTHALUM BUTTERFLY BUSH	6.0 - 8.
CALENDULA	5.5 - 7.
CAMASSIA	6.0 - 8. 6.0 - 7.
CANDYTUFT CANNA	6.0 - 8.
CANTERBURY BELLS	7.0 - 7.
CARDINAL FLOWER CARNATION	4.0 - 6. 6.0 - 7.
CATALPA	6.0 - 8.
CELOSIA	6.0 - 7.
CENTAUREA CERASTIUM	5.0 - 6. 6.0 - 7.
CHRYSANTHEMUM	6.0 - 7.
CISSUS	6.0 - 7.
CISTUS CLARKIA	6.0 - 7. 6.0 - 6.
CLIANTHUS	6.0 - 7.
CLEMATIS	5.5 - 7.
COLCHICUM	5.5 - 6.
CONVOLVULUS	6.0 - 7. 6.0 - 8.
COREOPSIS	5.0 - 6.
CORONILLA CORYDALIS	6.5 - 7. 6.0 - 8.
COSMOS	5.0 - 8.
COTTONEASTER	6.0 - 8.
CRAB APPLE CROCUS	6.0 - 7. 6.0 - 8.
CYNOGLOSSUM	6.0 - 7.
DAFFODIL	6.0 - 6.
DAHLIA DAY LILY	6.0 - 7. 6.0 - 8.
DELPHINIUM	6.0 - 7.
DEUTZIA	6.0 - 7.
DIANTHUS DOGWOOD	6.0 - 7. 5.0 - 7.
EDELWEISS	6.5 - 7.
ELAEAGNUS	5.0 - 7.
ENKIANTHUS ERICA	5.0 - 6.
EUPHORBIA	6.0 - 7.
EVERLASTINGS	5.0 - 6.
FIRETHORN FORGET-ME-NOTS	6.0 - 8. 6.0 - 7.
FORSYTHIA	6.0 - 8.
FOXGLOVE	6.0 - 7.
FRITILLARIA FUCHSIA	6.0 - 7. 5.5 - 7.
GAILLARDIA	6.0 - 7.
GAZANIA GENTIANA	5.5 - 7. 5.0 - 7.
GEUM	6.0 - 7.
GLADIOILI	6.0 - 7.
GLOBULARIA GODETIA	5.5 - 7. 6.0 - 7.
GOLDEN ROD	5.0 - 7.
GYPSOPHILIA	6.0 - 7.
HAWTHORN HEATHER	6.0 - 7. 4.0 - 6.
HELIANTHUS	5.0 - 7.
HELLEBORUS	6.0 - 7.
HOLLY HOLLYHOCK	5.0 - 6. 6.0 - 7.
HONEYSUCKLE	6.0 - 7.
HYACINTH	6.5 - 7.
HYDRANGEA (Blue) HYDRANGEA (Pink)	4.0 - 5. 6.0 - 7.
HYDRANGEA (White)	6.5 - 8.
HYPERICUM	5.5 - 7.
IRIS IVY	5.0 - 6. 6.0 - 7.
JUNIPER	5.0 - 6.
KALMIA	4.5 - 5.
KERRIA LABURNUM	6.0 - 7. 6.0 - 7.
an an ann an	

pН	NAME	pН
EES	FLOWERS, TREES AND SHRUBS	;
6.0 - 8.0	LAUREL	6.5 - 7.5
6.0 - 8.0	LAVENDER	6.5 - 7.5
5.5 - 7.5	LIATRIS	5.5 - 7.5
6.0 - 7.5 4.5 - 6.0	LIGUSTRUM LILAC	5.0 - 7.5 6.0 - 7.5
6.0 - 6.5	LILY OF THE VALLEY	4.5 - 6.0
4.0 - 6.0	LITHOSPERMUM	5.0 - 6.5
6.0 - 7.5	LOBELIA	6.5 - 7.5
6.0 - 7.5 6.0 - 7.6	LUPINUS MAGNOLIA	5.5 - 7.0 5.0 - 6.0
5.0 - 6.0	MAHONIA	6.0 - 7.0
6.0 - 7.0	MARIGOLD	5.5 - 7.0
6.0 - 8.0	MOLINIA	4.0 - 5.0
4.0 - 6.0 5.5 - 7.0	MORAEA MORNING GLORY	5.5 - 6.5 6.0 - 7.5
6.0 - 8.0	MOSS	6.0 - 8.0
6.0 - 7.5	MOSS, SPHAGNUM	3.5 - 5.0
6.0 - 8.0	MYOSOTIS	6.0 - 7.0
7.0 - 7.5 4.0 - 6.0	NARCISSUS	6.0 - 8.5 5.5 - 7.5
4.0 - 6.0	NICOTIANA	5.5 - 7.5
6.0 - 8.0	PACHYSANDRA	5.0 - 8.0
6.0 - 7.0	PAEONIA	6.0 - 7.5
5.0 - 6.5	PANSY	5.5 - 7.0
6.0 - 7.0 6.0 - 7.0	PASSION FLOWER PASQUE FLOWER	6.0 - 8.0 5.0 - 6.0
6.0 - 7.5	PAULOWNIA	6.0 - 8.0
6.0 - 7.5	PENSTEMON	5.507.0
6.0 - 6.5	PERIWINKLE	6.0 - 7.5
6.0 - 7.5 5.5 - 7.0	PETUNIA PINKS	6.0 - 7.5 6.0 - 7.5
5.5 - 6.5	POLYGONUM	6.0 - 7.5
6.0 - 7.0	POLYANTHUS	6.0 - 7.5
6.0 - 8.0	POPPY	6.0 - 7.5
5.0 - 6.0 6.5 - 7.5	PORTULACA PRIMROSE	5.5 - 7.5 5.5 - 6.5
6.0 - 8.0	PRIMULA	6.0 - 7.5
5.0 - 8.0	PRIVET	5.0 - 7.5
6.0 - 8.0	PRUNELLA	6.0 - 7.5
6.0 - 7.5 6.0 - 8.0	PRUNUS PYRETHRUM	6.5 - 7.5 6.0 - 7.5
6.0 - 8.0	RED HOT POKER	6.0 - 7.5
6.0 - 6.5	RHODODENDREN	4.5 - 6.0
6.0 - 7.5	ROSES:	
6.0 - 8.0	HYBRID TEA	5.5 - 7.0
6.0 - 7.5 6.0 - 7.5	CLIMBING RAMBLING	6.0 - 7.0 5.5 - 7.0
6.0 - 7.5	SALVIA	6.0 - 7.5
5.0 - 7.0	SCABIOSA	5.0 - 7.5
6.5 - 7.5	SEDUM	6.0 - 7.5
5.0 - 7.5 5.0 - 6.0	SNAPDRAGON SNOWDROP	5.5 - 7.0 6.0 - 8.0
4.5 - 6.0	SOAPWORT	6.07.5
6.0 - 7.0	SPEEDWELL	5.5 - 6.5
5.0 - 6.0	SPIRAEA	6.0 - 7.5
6.0 - 8.0	SPRUCE	4.0 - 5.0
6.0 - 7.0 6.0 - 8.0	STOCK STONECROP	6.0 - 7.5 6.5 - 7.5
6.0 - 7.5	SUMACK	5.0 - 6.5
6.0 - 7.5	SUNFLOWER	5.0 - 7.0
5.5 - 7.5	SWEET PEA	6.0 - 7.5
6.0 - 7.5 5.5 - 7.0	SWEET WILLIAM TAMARIX	6.0 - 7.5 6.5 - 8.0
5.0 - 7.5	TRILLIUM	5.0 - 6.5
6.0 - 7.5	TULIP	6.0 - 7.0
6.0 - 7.0	VIBERNUM	5.0 - 7.5
5.5 - 7.0 6.0 - 7.5	VIOLA VIRGINIA CREEPER	5.5 - 6.5 5.0 - 7.5
5.0 - 7.0	WALLFLOWER	5.5 - 7.5
6.0 - 7.5	WATER LILY	5.5 - 6.5
6.0 - 7.0	WEIGELIA	6.0 - 7.5
4.0 - 6.0 5.0 - 7.0	WISTARIA ZINNIA	6.0 - 8.0 5.5 - 7.5
6.0 - 7.5	TURF AND ORNAMENTAL O	
5.0 - 6.5	BAHAI	6.5 - 7.5
6.0 - 7.5	BENT	5.5 - 6.5
6.0 - 7.5 6.5 - 7.5	BERMUDA CANADA BLUE	6.0 - 7.0 4.5 - 6.4
4.0 - 5.0	CLOVER	4.5 - 6.4 6.0 - 7.0
6.0 - 7.0	KENTUCKY BLUE	6.0 - 7.5
6.5 - 8.0	MEADOW	6.0 - 7.5
5.5 - 7.0	PAMPAS RED TOP	6.0 - 8.0 6.0 - 6.5
5.0 - 6.5 6.0 - 7.5	RYE	6.0 - 6.5
5.0 - 6.5	ST. AUGUSTINE	6.5 - 7.5
4.5 - 5.0	TALL FESCUE	6.0 - 7.0
6.0 - 7.0 6.0 - 7.0	VELVET BENT ZOYSIA	5.0 - 6.0 6.0 - 7.0
0.0 - 1.0	LOIDIN	0.0 - 1.0

### Soil Test Kit Questions and Answers

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

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

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

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

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

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

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

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

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

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

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

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

## Question: The testing capsule didn't dissolve.

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

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

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

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



# 40 TESTS

# SOLL TEST KIT Tests Your Soil for a Healthy Garden • pH • Nitrogen(N) • Phosphorus(P) • Potassium(K) •

#### WHY TEST YOUR SOIL?

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

#### HOW TO TEST YOUR SOIL

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

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

#### WHEN TO TEST YOUR SOIL

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

#### Included in the kit are:

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



60183L

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# **APPENDIX H**

# **Correspondence & Notifications**

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



#### **Erick Herrera**

From:
Sent:
To:
Subject:

Morgan, Crisha A <camorgan@blm.gov> Thursday, July 18, 2024 11:07 AM Erick Herrera Re: [EXTERNAL] RE: RDX 17 Federal Com #006 Closure Request - Incident Number nRM2019548894

# **Bureau of Land Management**



The Closure Report for RDX 17 Federal Com 6 has been reviewed. Sampling report shows that NMOCD's Table 1 closure requirements have been met. More extensive work may be required during future major well pad construction/alteration or final plugging and abandonment. Please consider this the BLM's approval for closure. Please remember that it is still the operator's ultimate responsibility to gain stable vegetation in the spill area.

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws/regulations.

If you have any questions or concerns, please let me know. Have a great day!

**Crisha A. Morgan** |Certified - Environmental Protection Specialist | Program Officer |COR | Spills Coordinator | Orphaned & Idled Well POC Lead

Bureau of Land Management | Carlsbad Field Office 620 E. Greene Street Carlsbad, NM 88220 Cell 575-200-8648 | Office 575-234-5987 |<u>camorgan@blm.gov</u>



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From: Morgan, Crisha A <<u>camorgan@blm.gov</u>>
Sent: Wednesday, July 10, 2024 10:20 AM
To: Erick Herrera <<u>erick@etechenv.com</u>>
Subject: Re: [EXTERNAL] RE: RDX 17 Federal Com #006 Closure Request - Incident Number nRM2019548894

## Bureau of Land Management

I have it now! I will review it ASAP...

Crisha A. Morgan |Certified - Environmental Protection Specialist | Program Officer |COR | Spills Coordinator | Orphaned & Idled Well POC Lead Bureau of Land Management | Carlsbad Field Office 620 E. Greene Street Carlsbad, NM 88220 Cell 575-200-8648 | Office 575-234-5987 |camorgan@blm.gov



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From: Erick Herrera <<u>erick@etechenv.com</u>>
Sent: Wednesday, July 10, 2024 7:13 AM
To: Morgan, Crisha A <<u>camorgan@blm.gov</u>>
Subject: [EXTERNAL] RE: RDX 17 Federal Com #006 Closure Request - Incident Number nRM2019548894

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Chrisha,

I received a bounce back message. Wondering if you received this.

Thanks,

**Erick Herrera** 





**Project Geologist** 

Work: (432) 305-6416 Cell: (281) 777-4152

From: Erick Herrera <<u>erick@etechenv.com</u>>
Sent: Wednesday, July 10, 2024 7:58 AM
To: Morgan, Crisha A <<u>camorgan@blm.gov</u>>
Cc: Raley, Jim <<u>jim.raley@dvn.com</u>>; Devon-Team <<u>Devon-Team@etechenv.com</u>>
Subject: RDX 17 Federal Com #006 Closure Request - Incident Number nRM2019548894

Good morning,

On behalf of WPX Energy, LLC. (WPX), please find the attached Closure Request Report to address an inadvertent release for Incident Number nRM2019548894, at the RDX Federal Com 17 #006 (Site) for your review.

WPX respectfully requests consideration of the attached Closure Request.

If you have any questions, please let me know.

Thank you,

Erick Herrera Project Geologist

vironmental & Safety Solutions, Inc.

Work: (432) 305-6416 Cell: (281) 777-4152

#### **Erick Herrera**

From: Sent:	Hamlet, Robert, EMNRD <robert.hamlet@emnrd.nm.gov> Friday, April 26, 2024 11:20 AM</robert.hamlet@emnrd.nm.gov>
То:	Raley, Jim
Cc:	Devon-Team; Bratcher, Michael, EMNRD; Wells, Shelly, EMNRD; Velez, Nelson, EMNRD; Rodgers, Scott, EMNRD
Subject:	(Final Extension) - WPX Energy - RDX 17-6 (NRM2019548894)

Some people who received this message don't often get email from robert.hamlet@emnrd.nm.gov. Learn why this is important

RE: Incident #NRM2019548894

#### Jim,

Your request for a 90 day extension to **July 25th, 2024** is approved. This will be the **final extension** for this release. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 506 W. Texas Ave.| 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: Friday, April 26, 2024 8:18 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Devon-Team <Devon-Team@etechenv.com>
Subject: [EXTERNAL] Extension Request WPX Energy - RDX 17-6 (NRM2019548894)

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

Robert,

Apologies, the remediation closure report was due on 4/25/2024 for incident NRM2019548894, I overlooked this due date. We are finished with the cleanup and currently backfilling and seeding this site. As such, I respectfully ask NMOCD to allow an extra 90 days to deliver the remediation and reclamation closure reports. We do not anticipate any other delays.

A Remediation Work Plan Addendum (RWPA) was submitted for Incident Number nRM2019548894 and approved by the NMOCD on January 26, 2024. Since the RWPA approval, approximately 3,920 cubic yards of impacted soil has been excavated and removed from the Site and hauled to an approved landfill facility under WPX approved waste manifests. The excavation was sampled in accordance with 19.15.29.12.D.(1)(a) NMAC and the approved RWPA

sampling variance. Confirmation excavation soil samples were submitted to an accredited laboratory to be analyzed for BTEX (EPA 8021B), TPH (EPA 8015M), and chloride (EPA 300.0) by their respective, approved methods. Final laboratory analytical results were received on April 18, 2024, and indicated that all residual impacts associated with Incident Number nRM2019548894 have been removed from the Site, according to the applicable Site Closure Criteria.

To provide enough time for the completion of restoration activities, compilation of laboratory analytical results and field summaries associated with Incident Number nRM2019548894, and submittal of a formal report, WPX requests a 90-day extension of the deadline to **July 24, 2024.** 

Jim Raley | Environmental Professional - Permian Basin 5315 Buena Vista Dr., Carlsbad, NM 88220 C: (575)689-7597 | jim.raley@dvn.com



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

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

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

District III

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

District IV

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

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

QUESTIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	329807
	Action Type:
	[NOTIEY] Notification Of Sampling (C-141N)

#### QUESTIONS

Prerequisites		
Incident ID (n#) nRM2019548894		
Incident Name	NRM2019548894 RDX 17 FEDERAL COM #006H @ 30-015-39308	
Incident Type	Produced Water Release	
Incident Status	Remediation Plan Approved	
Incident Well	[30-015-39308] RDX 17 FEDERAL COM #006H	

#### Location of Release Source

Site Name	RDX 17 FEDERAL COM #006H
Date Release Discovered	07/05/2020
Surface Owner	Federal

#### Sampling Event General Information

Please answer	all the	questions in	this group.

Please answer all the questions in this group.		
What is the sampling surface area in square feet	20,625	
What is the estimated number of samples that will be gathered	25	
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/09/2024	
Time sampling will commence	08:30 AM	
Please provide any information necessary for observers to contact samplers	Please contact Gilbert Moreno at 432-305-6414 with any questions.	
Please provide any information necessary for navigation to sampling site	From the intersection of Tarbrush Rd, and Pipeline Rd, Go east on Pipeline Rd for 3.2 mi; turn right for 1.60 mi; right for 0.38 mi to site GPS (32.041235, -103.9018005).	

QUESTIONS

Action 329807

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

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

District III

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

District IV

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

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

CONDITIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	329807
	Action Type:
	[NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Create By	d Condition	Condition Date
jrale	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	4/3/2024

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Action 329807

# **APPENDIX I**

# **Archived Reports**

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



District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

)

Incident ID	NRM2019548894
District RP	
Facility ID	
Application ID	

# **Release Notification**

### **Responsible Party**

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

#### **Location of Release Source**

Latitude 32.041235

 Longitude
 -103.9018005

 (NAD 83 in decimal degrees to 5 decimal places)

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

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

Surface Owner: State X Federal Tribal Private (Name: \_

## Nature and Volume of Release

Mater	ial(s) Released (Select all that apply and attach calculations or specific	c justification for the volumes provided below)
Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
X Produced Water	Volume Released (bbls): 35	Volume Recovered (bbls): 5
	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:

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

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

ervea by OCD: 1/19/202	Jate of New Mexico		Page 103 (		
State of New Mexicoage 2Oil Conservation Division	Incident ID	NRM2019548894			
	Oil Conservation Division	District RP			
		Facility ID			
		Application ID			
W 41::	If VES for the former (a) does the second shift and	·	)		
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible part Release was over 25bbl of fluid.	ty consider this a major release.			
X Yes 🗌 No					
If VES was immediate a	otice given to the OCD? By whom? To whom? Wh	en 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

 $\overline{\mathbf{X}}$  The source of the release has been stopped.

 $\mathbf{X}$  The impacted area has been secured to protect human health and the environment.

X Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

X All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Lynda Laumbach	Title: Environmental Specialist
Signature: Jorda Sombach	Date: 07/06/2020
email: Lynda.Laumbach@wpxenergy.com	Telephone: (575)725-1647
OCD Only	
Received by: <u>Ramona Marcus</u>	Date: 7/13/2020

Received by OCD: 7/19/2024/8:47:33/24/11 Form C-141 State of New Mexico

**Oil Conservation Division** 

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Incident ID	nRM2019548894
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 <b>not</b> 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 <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- $\mathbf{X}$ 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.

Received by OCD: 7/19/20	Mail of New Mexico				Page 105 of
				Incident ID	nRM2019548894
Page 4 Oil G	Oil Conservation Division	Oil Conservation Division	District RP		
				Facility ID	
				Application ID	
public health or the environment failed to adequately investig	/	OCD does reat to grou f responsib Title: Date:	not relieve the ndwater, surfa ility for compl	operator of liability shi ce water, human health iance with any other fer ental Profession	ould their operations have or the environment. In deral, state, or local laws
OCD Only Received by: Jocely	n Harimon		Date: 10/1	7/2022	

Received by OCD: 7/19/2024 8:47:33 24M1 Form C-141 State of New Mexico

Page 5

Oil Conservation Division

Incident ID	nRM2019548894
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

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

Detailed description of proposed remediation te Scaled sitemap with GPS coordinates showing of Estimated volume of material to be remediated Detailed description of proposed remediation technique

Scaled sitemap with GPS coordinates showing delineation points

X

Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC

 $\overline{\mathbf{X}}$ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Defensel Deservets Order, Each of the following items and the	<u>Come 1 </u>	
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.		
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.		
Extents of contamination must be fully delineated.		
Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name: Jim Raley	Title: Environmental Professional	
Printed Name:Jim Raley Signature:	Date:	
email: jim.raley@dvn.com	Telephone: 575-686-7597	
OCD Only		
Received by:	Date: 10/17/2022	
Approved X Approved with Attached Conditions of	Approval Denied Deferral Approved	
Signature: Scott Rodgers	Date: 01/26/2024	

# **ENSOLUM**

## **REMEDIATION WORK PLAN ADDENDUM**

Site Location:

RDX 17 Federal Com #006H Eddy County, New Mexico Incident Number: NRM2019548894

April 28, 2022 Ensolum Project No. 03A1987010

Prepared for:

WPX Energy Permian, LLC 5315 Buena Vista Dr. Carlsbad, NM 88220 Attention: Jim Raley

Prepared by:

Anyn S. Holy -

Joseph S. Hernandez Senior Geologist

Ashley L. ager

Ashley Ager, M.S., PG Program Director, Geologist

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 10333 Harwin Drive, Suite 470 | Houston, TX 77036 | ensolum.com RDX 17 Federal Com #006H Incident Number: NRM2019548894 Remediation Work Plan Addendum April 28, 2022

### ENSOLUM

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	1.2 Site Characterization	1&2
	1.3 Project Objective	2
2.0	REMEDIATION WORK PLAN EXECUTION	2
	2.1 Excavation Activities	2
	2.2 Delineation Activities	3
3.0	SOIL SAMPLING RESULTS	3
4.0	REMEDIATION WORK PLAN ADDENDUM	3,4&5
	4.1 Proposed Sampling	5
	4.2 Proposed Schedule	5

### **APPENDICES**

Appendix A:	Figure 1 – Site Map
	Figure 2 – Excavation Soil Sample Locations
	Figure 3 – Delineation Soil Sample Locations
Appendix B:	Photographic Log
Appendix C:	Lithologic Soil Sampling Logs
Appendix D:	Tables
Appendix E:	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F:	Email Correspondence
### 

### 1.0 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared this Remediation Work Plan Addendum (RWPA) to document corrective actions completed by WPX Permian Energy, LLC (WPX) at the RDX 17 Federal Com #006H (hereinafter referred to as the "Site") in Unit J, Section 17, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1 in Appendix A). The purpose of the RWPA is to supplement corrective actions that have been executed in accordance with a Remediation Work Plan (RWP) authored by WPX, which was approved by the New Mexico Oil and Conservation Division (NMOCD) on July 21, 2021. Based on current field observations, field screening activities and review of the laboratory analytical results from excavation and delineation soil sampling activities at the Site, WPX respectfully submits this RWPA which summarizes activities performed to date and proposes additional remediation and soil sampling activities to further address soil impacts at the Site.

### 1.1 Site Description and Release Background

The Site is located within Eddy County, New Mexico (32.041235° N, 103.9018005° W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land (**Figure 1 in Appendix A**).

On July 5, 2020, a produced water polyline connection failed and resulted in approximately 35 barrels (bbls) of produced water to be released along a recently reclaimed lease road. Approximately 5 bbls of produced water were recovered via vaccum truck. WPX reported the release to the NMOCD via email on July 5, 2020 and with a subsequent Corrective Action Form C-141 (Form C-141) July 6, 2020. The release was assigned Incident Number NRM2019548894.

### **1.2** Site Characterization

A detailed Site Characterization can be referenced in the approved RWP report, submitted by WPX. 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.** 

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) were applied:

- 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.

ENSOLUM

### 1.3 **Project Objective**

The primary objectives of Ensolum's scope of services were to document initial remediation activities performed at the Site were completed in accordance with the approved RWP and to document those concentrations of constituents of concern (COCs) present in soil remaining on-Site.

### 2.0 REMEDIATION WORK PLAN EXECUTION

A third-party contractor, WSP USA, Inc. (WSP), conducted soil sampling activities at the Site to verify the presence or absence of soil impacts associated with the subject release and oversaw initial excavation efforts to remove impacted soil and 20-mil impermeable liner installation. To date, approximately 5,820 cubic yards of impacted soil have been removed from the Site.

### 2.1 Excavation Activities

Between December 9, 2021 and February 9, 2022, excavation activities were conducted by WPX to remove identified impacted soil from the Site utilizing heavy equipment. Excavation activites were directed by field sceening soil for volatile organic compounds (VOCs) utilizing a calibrated photo-ionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Following removal of impacted soil, WSP collected confirmation sidewall soil samples (samples designated as SW) at a sampling frequency of 200 square feet from excavation to confirm if impacted soil above reclamation and/or Closure Criteria was successfully removed. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. SW01 through SW23 were collected from the sidewalls of the excavation at depths ranging from ground surface to approximately 4 feet bgs. Due to a liner installation set to cover the entirety of the excavation footprint, composite floor soil samples were not collected from the excavation. The location of the confirmation sidewall soil samples and excavation extent are shown on **Figure 2 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 BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. Photographic documentation during excavation activities is included in **Appendix B**.

### 2.2 Delineation Activities

Between January 10, 2022 and January 17, 2022, delineation activities were conducted by WSP to complete vertical delineation within the proposed liner installation area and to investigate the extent of impacted soil southeast of the excavation area, outside of the original scope of work defined in the approved RWP. Delineation samples were collected in potholes advanced with heavy equipment (samples designated PH). Delineation activities were directed by field sceening soil for VOCs utilizing a calibrated PID and chloride using Hach® chloride QuanTab® test strips. A minimum of two soil samples were collected from each delineation soil sample location

### 

(PH01 through PH12): including the sample with the highest observed field screening and the greatest depth. The location of the delineation samples and area of concern are shown in **Figure 3 in Appendix A**. Field screening results and observations for each delineation soil sample were recorded on lithologic soil sampling logs (**Appendix C**). The soil samples were collected, handled and analyzed as previously described. Photographic documentation during delineation activities is included in **Appendix B**.

Per the approved RWP, a 20-mil impermeable liner was installed in the excavation associated with the reclaimed lease road to mitigate future migration of residual chloride impacts into the subsurface on February 14, 2022. The original RWP documented soil impacts in this area up to 10 feet bgs. The liner installation area is depicted on **Figures 2 and 3 in Appendix A**. Photographic documentation of the liner installation is included in **Appendix B**. The excavation was subsequently backfilled, and the Site was restored to "as close to its original state" as possible.

### 3.0 SOIL SAMPLING RESULTS

Laboratory analytical results for SW01 through SW16 were below the reclamation standard and/or Closure Criteria; SW17 through SW23 indicated COCs exceeded the reclamation standard requirement, adjacent to the area of concern.

Laboratory analytical results for PH01 through PH03 define the vertical extent of impact within the liner excavation area was below the Closure Criteria; PH09 through PH12 indicated COCs exceed the reclamation standard, however, based on the current extent of soil characterization at the Site, it appears that vertical impacts do not exceed 4 feet bgs within the area of concern. Results for PH04 through PH08 were below the reclamation standard and/or Closure Criteria and estimates the horizontal boundary of impact related to the area of concern.

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

### 4.0 REMEDIATION WORK PLAN ADDENDUM

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

- To date, approximately 5,820 cubic yards of impacted soil has been removed and disposed of at R360 Environmental Solutions in Orla, Texas, addressing the entire proposed excavation area in the original RWP;
- Based on laboratory analytical results for delineation samples PH01 through PH08 and final confirmation sidewall soil samples SW01 through SW16, the excavation area has been vertically and laterally delineated;
- A 20-mil impermeable liner was installed in the excavation associated with the reclaimed lease road to mitigate future migration of residual chloride impacts into the subsurface. The original RWP documented soil impacts in this area up to 10 feet bgs;

- Based on laboratory analytical results for PH04 through PH12, an additional 5,500 cubic yards of impacted soil is anticipated to be remediated and/or removed from the Site for disposal in accordance with state and federal regulations for the extent. The area of concern is displayed on Figure 3 in Appendix A;
- Soil impacts within the area of concern do not exceed 4 feet bgs.

Based on the conclusions presented above, the following remediation is proposed:

- Additional impacted soil associated with SW17 through SW23, and area of concern will be excavated pursuant to NMAC 19.15.29 to ensure the lateral extent of the impacted soil not meeting the reclamation standard requirement has been identified and removed. Excavated soil will then be transferred to: (a) a New Mexico approved landfill facility for disposal and the excavation will be backfilled with non-waste containing soil, as defined by "Procedures for Implementation of the Spill Rule" (September 6, 2019) or (b) an on-site ex-situ treatment cell for chloride extraction. Following review of the additional soil characterization at the Site, WPX will re-evaluate the proposed remedial options and submit a revised RWP detailing the option (b) treatment and sampling plan for NMOCD review, if selected.
- Horizontal delineation will achieved through 5-point composite sidewall soil samples following the removal of residual impacts;
- Access for remediation or disturbance that occurs offsite requires BLM approval with additional coverage. WPX will prepare and submit documentation for proposed additional work areas before initiating corrective actions;
- There are areas off pad (ex. reclaimed pad and access road) that may require third-party
  operator oversight and additional safety measures to be in place before or during
  remediation activities near their respective utilities. WPX or third-party operator may
  implement additional safety precautions above encroachment guidelines, including
  restrictions on hand shoveling and cribbing. These restrictions may be implemented as
  health and safety precautions at the judgment and responsibility of a WPX or third-party
  operator safety representative.
- Subsequent to the completion of remediation and receipt of soil confirmation sample results documenting that impacted soil had been removed, the additional excavation area will be backfilled with clean and/or treated soil and restored to "as close to its original state" as soon as possible.

### 4.1 **Proposed Sampling**

WPX is requesting a variance to the 200 square foot confirmation sampling requirement for the area to be excavated, which would require an estimated additional 151 floor soil samples within the area of concern, excluding sidewall samples. Due to the large extent of the impacted area (30,200 square feet), Ensolum proposes increasing the confirmation sampling size to collecting a 5-point composite sample to represent each 1,000 square foot area for the floors and sidewalls of the excavation.

### 4.2 **Proposed Schedule**

WPX believes the scope of work described above will meet requirements set forth in NMAC 19.15.29.13 and be protective of human health, the environment, and groundwater. As such, WPX respectfully requests approval of this RWPA from NMOCD.

Based on the extent of corrective measures, planning and potential third-party operator oversight at the Site, WPX anticipates beginning remediation within **180 days** of the approval of the RWPA.



# APPENDIX A

Figures

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#### Received by OCD: 7/19/2024.8:47:33.2AM

### Page 115 of 481









# APPENDIX B

Photographic Documentation

### Photographic Log

WPX Energy Permian, LLC. RDX 17 Federal Com #006H Incident Number: nRM2019548894 Ensolum Job Number: 03A1987010



C ENSOLUM

**Photograph 1** Date: December 2021 through February 2022 Description: Eastern excavation activities prior to relocating surface flowlines



Photograph 2 Date: December 2021 through February 2022 Description: Western excavation activities









# APPENDIX C

Lithologic Soil Sampling Logs

								Sample Name: PH01	Date: 1/17/2022
l Fe		-		C	OL		R/	Site Name: RDX 17 Federal Com #	#006H
1.5				2				Incident Number: nRM20195488	94
						Job Number: 03A1987010			
	L	ITHOL	OGIC	: / SOIL S	AMPLING	Logged By: Gilbert Moreno	Method: Track Hoe		
Coordi	inates: 32.0	041009,-	103.9	01768		Hole Diameter: N/A	Total Depth: 22 feet		
			-			ID for chloride and vapor, respect ctors included.	ively. Chloride test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
$\sim$					1	Lo			
	$\overline{\ }$				-				
		EXCA	VATE	D	-	F		EXCANA	ATED
Í					-	-			$\searrow$
					$\overline{}$				
			<u>г</u>		4	0-4', previously excavated			
-	-	-	-	-	4	-	CCHE	0-4, previously excavated	
Dry	4,313	0.1	No	_	6	5		4-16', CALICHE, dry, tan, well grain, well consolidated, r	
DIY	4,515	0.1	NO		-	-		16-22', SILTY SAND, dry, tan-b	prown, fine-medium
					-	-		grain, well consolidate dark grey cobbles, no	
Dry	8,712	0.1	No	-	8	-			
					_	_			
Dry	6,384	0.1	No	_	10	10			
	0,504	0.1	NO	_	10 _	_ 10			
					-	-			
Dry	10,224	0.1	No	PH01	12	-			
					-	L			
D	F 000	0.2	N -			-			
Dry	5,908	0.3	No	-	14	-			
					-	15			
Dry	9,432	0.2	No	-	16		SM		
			_		_				
					-	<u>-</u>			
Dry	8,712	0.6	No	-	18	-			
					_				
Dry	5,056	3.0	No	_	20	20			
	5,050	5.0	110	-	20	20			
					-	-			
Dry	5,464	3.5	No	PH01	22	-			
									Total Depth

								Sample Name: PH02	Date: 1/17/2022
I De		-		C	OL			Site Name: RDX 17 Federal Com #	006H
1.5				2				Incident Number: nRM20195488	94
						Job Number: 03A1987010			
		ITHOL	OGIC	/ SOIL S	AMPLING	Logged By: Gilbert Moreno	Method: Track Hoe		
Coordi	nates: 32.	041009,-	103.9	01768				Hole Diameter: N/A	Total Depth: 22 feet
			-			ID for chloride and vapor, respecti ctors included.	vely. Chloride test		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
$\sim$					Ţ				
					-	- ~ -			
		EXCA	VATE	D	-	-		EXCANA	TED
					-	-			
						-			
		_	<u> </u>		4	0-4', previously excavated			
-	-	-	-	-	4 -	-	CCHE		
					-	5		4-16', CALICHE, dry, tan, well grain, well consolidated, r	
Dry	5,056	0.6	No	PH02	6	-			
					-	-		16-22', SILTY SAND, dry, tan-b grain, well consolidate	rown, fine-medium d. some
	2 070	07				-		dark grey cobbles, no	
Dry	3,976	0.7	No	-	8	-			
					-	F			
Dry	4,312	1.0	No	-	10	10			
					-	-			
					-	-			
Dry	3,368	4.0	No	-	12 _	-			
						-			
Dry	3,976	1.1	No	-	14	F			
,	-,•								
					-	15			
Dry	5,056	0.8	No	-	16 _	-	SM		
					_	F			
Dry	3,368	1.0	No	_	18	F			
	5,500	1.0	110	-	10				
					-	ŀ			
Dry	3,976	2.5	No	-	20	20			
						F			
	2 002	2.0	N -			-			
Dry	3,092	2.0	No	PH02	22		I		Total Depth
									iotai Deptii

				_				Sample Name: PH03	Date: 1/17/2022
		-		C	01			Site Name: RDX 17 Federal Com #	
11		-		2	ΟΙ			Incident Number: nRM20195488	
								Job Number: 03A1987010	
	l	ITHOL	OGIC	/ SOIL S	AMPLING	Logged By: Gilbert Moreno	Method: Track Hoe		
Coordi	nates: 32.	041009,-	103.9	01768				Hole Diameter:N/A	Total Depth:22 feet
			-					ID for chloride and vapor, respecti	vely. Chloride test
perfori	med with :	1:4 diluti	on fac	ctor of soil	to distilled w	vater. No coi	rrection fa	ctors included.	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
					<u>T</u>	Lo			
					_	_			
		EXCA	VATE	D	-	F		EXCAVA	TED
					-	ŀ			
						_			
	_	-		_	4		CCHE	0-4', previously excavated	
							COLL		
					-	5		4-16', CALICHE, dry, tan, well grain, well consolidated, r	
Dry	5,908	0.1	No	PH03	6	-			
					_	_		16-22', SILTY SAND, dry, tan-b grain, well consolidate	rown, fine-medium d, some
Dura	1.042	0.2	N -			-		dark grey cobbles, no s	
Dry	1,942	0.2	No	-	8	-			
					-	F			
Dry	1,744	0.7	No	-	10	10			
					_	-			
					-	-			
Dry	1,088	0.5	No	-	12	-			
						-			
Dry	1,028	0.5	No	-	14	┝			
	1,020	0.5	10			- ,-			
					-	15			
Dry	1,028	0.5	No	-	16	-	SM		
						F			
	100	1.0	N -		10	Ļ			
Dry	196	1.0	No	-	18	ŀ			
					-	F			
Dry	548	1.0	No	-	20	20			
					_	F			
	500	0.0		DU 66		-			
Dry	500	0.6	No	PH03	22				Total Depth
l									

								Sample Name: PH04	Date: 1/10/2022
L F		-	N	C	01	11	RA	Site Name: RDX 17 Federal Com #0	
1.5			R	2		- 0		Incident Number: nRM2019548894	4
								Job Number: 03A1987010	
		lithol	OGI	C / SOIL S	SAMPLING	i log		Logged By: Anna Byers	Method: Track Hoe
	inates: 32							Hole Diameter: N/A	Total Depth: 1 foot
								PID for chloride and vapor, respect factors included.	ively. Chloride test
Moisture Content Content Chamber Content Chamber Chamb								Lithologic Des	criptions
					للـ -		SP-SM	0-1', SAND, dry, brown, poorly and gravel, trace roots, no	graded with silt o stain, no odor
Dry	136	0.1	No	PH04	0.5	-			
Dry	284	0.2	No	PH04	1	- - 1			
$\searrow$									Total Depth
	$\overline{\ }$								
		$\backslash$							
			$\overline{\ }$						
				$\overline{}$					
					$\overline{}$				
								<	
								$\mathbf{i}$	
								$\mathbf{i}$	
								$\sim$	
									$\searrow$
									$\mathbf{i}$
									$\sim$
									$\sim$

ENSOLUM       Site Name: RDX 17 Federal Com #006H         Incident Number: nRM2019548894         Job Number: 03A1987010         LITHOLOGIC / SOIL SAMPLING LOG       Logged By: Anna Byers         Coordinates: 32.041009, -103.901768       Hole Diameter: N/A	
Job Number: 03A1987010           LITHOLOGIC / SOIL SAMPLING LOG         Logged By: Anna Byers         Method: T           Coordinates: 32.041009, -103.901768         Hole Diameter: N/A         Total Dept	
LITHOLOGIC / SOIL SAMPLING LOGLogged By: Anna ByersMethod: TCoordinates: 32.041009, -103.901768Hole Diameter: N/ATotal Dept	
Coordinates: 32.041009, -103.901768 Hole Diameter: N/A Total Dept	the shell be a
	гаск ное
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride performed with 1:4 dilution factor of soil to distilled water. No correction factors included.	de test
Moisture ContentMoisture ContentContent ChlorideContent ChlorideChloride (ppm)Chloride Chloride	
U O SP-SM O-1', SAND, dry, brown, poorly graded wit and gravel, trace roots, no stain, no	th silt odor
Drv 356 0.2 No PH05 0.5	
Dry 136 0.2 No PH05 1 1 1	Total Depth

								Sample Name: PH06	Date: 1/10/2022
		-	N	C	01	11	RA	Site Name: RDX 17 Federal Com #0	
1.5		-	R	2	01	. 0		Incident Number: nRM2019548894	1
								Job Number: 03A1987010	
		LITHOL	OGI	C / SOIL S	SAMPLING	LOG		Logged By: Anna Byers	Method: Track Hoe
	nates: 32							Hole Diameter: N/A	Total Depth: 1 foot
								PID for chloride and vapor, respecti factors included.	vely. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	criptions
					للـ 	L 0 	SP-SM	0-1', SAND, dry, brown, poorly and gravel, trace roots, no	graded with silt o stain, no odor
Dry	<112	0.1	No	PH06	0.5	- - -			
Dry	<112	0.2	No	PH06	-	- - 1			
$\sim$									Total Depth

Site Name: RDX 17 Federal Com #006H         Introduction       Site Name: RDX 17 Federal Com #006H         Introduction       Coordinate: 32.04108) - 103 901768         Coordinate: 32.04108) - 103 901768       Loge Days and PD for chorder and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.         and point of the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Lithologic Descriptions         and point of the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Lithologic Descriptions         and point of the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Lithologic Descriptions         and point of the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Total Descriptions         and point of the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Total Descriptions         and gravel, trace roots, no stain, no odor       Dry < 112			Sample Name: PH07	Date: 1/10/2022
Job Number: 03A1987010         LITHOLOGIC / SOIL SAMPLING LOG       Logged By: Anna Byers       Method: Track Hoe         Coordinates: 32.041009, -103.901768       Hole Diameter: N/A       Total Depth: 1 foot         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.       Depth       O       Sample Depth (ft bgs)       Depth (ft bgs)       O       SP-SM       Lithologic Descriptions         Ury       <112	EENCOLL			
LITHOLOGIC / SOIL SAMPLING LOG       Logged By: Anna Byers       Method: Track Hoe         Coordinates: 32.041009, -103.901768       Hole Diameter: N/A       Total Depth: 1 foot         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.       Itel Diameter: N/A       Total Depth: 1 foot         unt to performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Itel Diameter: N/A       Itel Diameter: N/A         unt to performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Itel Diameter: N/A       Itel Diameter: N/A         unt to performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Itel Diameter: N/A       Itel Diameter: N/A         unt to performed with 0:1:4 dilution factor of soil to distilled water. No correction factors included.       Itel Diameter: N/A       Itel Diameter: N/A         unt to performed with 0:1:4 dilution factor of soil to distilled water. No correction factors included.       Itel Diameter: N/A       Itel Diameter: N/A         unt to performed with 0:1:4 dilution factor of soil to distilled water.       Depth (ft bgs)       Depth (ft bgs)       Depth (ft bgs)       Depth (ft bgs)       Itel Diameter: N/A         Unt to performed with 0:1:4 dilution factor of soil to distilled water.       Depth (ft bgs)       Depth (ft bgs)<	LENSULU		Incident Number: nRM2019548	3894
Coordinates: 32.041009, -103.901768       Total Depth: 1 foot         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.         and to be the performed with 1:4 dilution factor of soil to distilled water. No correction factors included.       Depth (ft bgs)			Job Number: 03A1987010	
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.         an tigo of the tigo of	LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Track Hoe
performed with 1:4 dilution factor of soil to distilled water. No correction factors included.         and to be the second secon				
Dry       <112				ectively. Chloride test
Dry         <112	Moisture Content Content Chloride Debty (tpm) (tpm) (tpm) (tpm) (tpm) (tpm) (tpm)	(s d USCS/Rock Symbol	Lithologic D	Descriptions
Dry <112 0.2 No PH07 1 1		SP-SM	0-1', SAND, dry, brown, poo and gravel, trace roots	rly graded with silt , no stain, no odor
	Drv <112 0.1 No PH07 0.5			
		<u> </u>	l	Total Depth

						Sample Name: PH08	Date: 1/10/2022
	EN	IC	01			Site Name: RDX 17 Federal Com #0	06H
				- 0		Incident Number: nRM2019548894	1
						Job Number: 03A1987010	
	LITHOLOG	IC / SOIL S	SAMPLING	i log		Logged By: Anna Byers	Method: Track Hoe
Coordinates: 32						Hole Diameter: N/A	Total Depth: 1 foot
						PID for chloride and vapor, respecti factors included.	vely. Chloride test
Moisture Content Chloride (ppm)	Vapor (ppm) Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	criptions
			للـ 	L - 0 -	SP-SM	0-1', SAND, dry, brown, poorly a and gravel, trace roots, no	
Drv <112	0.2 No	PH08	0.5	- - -			
				-			
Dry <112	0.1 No	PH08	1	1			Total Depth

								Sample Name: PH09	Date: 1/10/2022
I De		-	N	C	01		RA	Site Name: RDX 17 Federal Com	#006H
11.5		-	IX.	2		- 0		Incident Number: nRM20195488	394
								Job Number: 03A1987010	
		LITHOL	.OGI	C / SOIL S	SAMPLING	i log		Logged By: Gilbert Moreno	Method: Track Hoe
	inates: 32							Hole Diameter: N/A	Total Depth: 4 feet
								PID for chloride and vapor, respe factors included.	ctively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
Duri	540	0 5	No			L 0 	CCHE	0-4', CALICHE, dry, tan-brown fine-medium grain, well stain, no odor	
Dry	548	0.5	No	-	0.5	-			
Dry	1,012	0.2	No	PH09	1	1			
					-	- - - - -			
Dry	1,412	0.1	No	PH09	2	2			
-	-	-	-	-	  -	- 3 -			
Dry	2,015	0.3	No	РН09	4	4			
$\square$									Total Depth
			_	_					
								_	
1									
I									

								Sample Name: PH10	Date: 1/10/2022
I De		-	N	C	01		RA	Site Name: RDX 17 Federal Com #	#006H
		-		2				Incident Number: nRM20195488	94
								Job Number: 03A1987010	
		LITHOL	OGI	C / SOIL S	SAMPLING	i log		Logged By: Gilbert Moreno	Method: Track Hoe
	inates: 32							Hole Diameter: N/A	Total Depth: 4 feet
								PID for chloride and vapor, respect factors included.	ctively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
					للـ - 	L _ 0 _ _	CCHE	0-4', CALICHE, dry, tan-brown fine-medium grain, well stain, no odor	
Dry	348	0.2	No	-	0.5	-			
Dry	648	0.5	No	PH10	1 .	1			
Dry	2,312	0.1	No	PH10	- - - - - - - - -	- - - - - 2			
	_,					 - - - -			
-	-	-	-	-	   	3 			
Dry	952	0.3	No	PH10	4	- 4			
				-					Total Depth
1									

Sample Name: PH11	Date: 1/10/2022
	06H
ENSOLUM Site Name: RDX 17 Federal Com #00 Incident Number: nRM2019548894	
Job Number: 03A1987010	
LITHOLOGIC / SOIL SAMPLING LOG Logged By: Gilbert Moreno	Method: Track Hoe
Coordinates: 32.041009, -103.901768 Hole Diameter: N/A	Total Depth: 4 feet
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respective performed with 1:4 dilution factor of soil to distilled water. No correction factors included.	vely. Chloride test
Moisture Content Chloride Chloride Debty (Lt pgs) Content Chloride	criptions
Dry 348 0.2 No - 0.5	
Dry 648 0.5 No PH11 1 1	
Dry 2,312 0.1 No PH11 2 2 2	
Drv 952 0.3 No PH11 4 4	
	Total Depth

								Sample Name: PH12	Date: 1/10/2022
I De		-	N	C	01	11	R.A	Site Name: RDX 17 Federal Com #	
115			R	2	01	- 0		Incident Number: nRM201954889	94
_								Job Number: 03A1987010	
		LITHOL	OGI	C / SOIL S	SAMPLING	i LOG		Logged By: Gilbert Moreno	Method: Track Hoe
Coord	inates: 32	2.041009	, -103	.901768				Hole Diameter: N/A	Total Depth: 4 feet
								PID for chloride and vapor, respec factors included.	tively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
Dry	448	0.1	No	_	0.5	1 - 0 -	CCHE	0-4', CALICHE, dry, tan-brown, fine-medium grain, well o stain, no odor	
					_	-			
Dry	748	0.2	No	PH12	1	1			
Dry	1,648	0.1	No	PH12	- - - 2 - - - - -	2			
-	-	-	-	-		- - - - -			
Data	1 2 2 2	0.2	N -		, -	- -			
Dry	1,332	0.3	No	PH12	4	4		I	Total Depth
									iotal Depth
						_			



# APPENDIX D

Tables

.

## **ENSOLUM**

				WPX Energy P	TABLE 1         SAMPLE ANALYTIC         Permian, LLC RDX         Eddy County, New         Isolum Project No. 0	17 Federal Com #006i Mexico	4							
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 MRO (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	12/09/2021	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	183				
SW02	12/09/2021	0 - 4	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	137				
SW03	12/09/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	375				
SW04	12/10/2021	0 - 4	0.037	0.124	<50.0	<50.0	<50.0	<50.0	<50.0	162				
SW05	12/15/2021	0 - 4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	465				
SW06	12/14/2021	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	469				
SW07	12/16/2021	1 - 4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	513				
SW08	12/16/2021	1 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	395				
SW09	12/16/2021	1 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	102				
SW10	12/16/2021	1 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	401				
SW11	01/06/2022	0 - 4	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	214				
SW12	01/06/2022	0 - 4	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	234				
SW13	01/06/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	278				
SW14	01/06/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	247				
SW15	01/06/2022	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	431				
SW16	01/06/2022	0 - 4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	387				
SW17	02/09/2022	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	2,430				
SW18	02/09/2022	0 - 4	<0.00201	<0.00402	<50.0	354	<50.0	354	354	5,230				
SW19	02/09/2022	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	3,700				
SW20	02/09/2022	0 - 4	<0.00199	<0.00398	<50.0	86.3	<50.0	86.3	86.3	3,590				
SW21	02/09/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	4,990				
SW22	02/09/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	9,120				
SW23	02/09/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	4,450				
				Delinea	tion Soil Sample An	alytical Results								
PH01	01/07/2022	12	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	14,800				
PH01	01/07/2022	22	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	12,900				
PH02	01/07/2022	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	8,430				

### **ENSOLUM**

	TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS WPX Energy Permian, LLC RDX 17 Federal Com #006H Eddy County, New Mexico Ensolum Project No. 03A1987010													
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 MRO (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				
PH02	01/07/2022	22	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	6,070				
PH03	01/07/2022	6	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	9,860				
PH03	01/07/2022	22	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	920				
PH04	01/10/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	161				
PH04	01/10/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	361				
PH05	01/10/2022	0.5	<0.00199	<0.00398	<49.9	56.5	<49.9	56.5	56.5	421				
PH05	01/10/2022	1	<0.00199	<0.00398	<49.9	76.8	<49.9	76.8	76.8	195				
PH06	01/10/2022	0.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	6				
PH06	01/10/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	8				
PH07	01/10/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	<5.00				
PH07	01/10/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01				
PH08	01/10/2022	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	11				
PH08	01/10/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	326				
PH09	01/10/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,620				
PH09	01/10/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,990				
PH09	01/10/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	3,390				
PH10	01/10/2022	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	879				
PH10	01/10/2022	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	3,970				
PH10	01/10/2022	4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	1,510				
PH11	01/10/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,580				
PH11	01/10/2022	2	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	1,760				
PH11	01/10/2022	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	2,630				
PH12	01/10/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,210				
PH12	01/10/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,000				
PH12	01/10/2022	4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	1,790				

#### 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 MRO: Motor Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the New Mexico Administrative Code Reclamation

Standard (NMAC 19.15.29.13.D (1))

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## APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation Received by OCD: 7/19/2024 28:47:33 2AMI

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

### Laboratory Job ID: 890-1694-1

Laboratory Sample Delivery Group: Eddy County Client Project/Site: RDX 17-6 314083360.006

### For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 12/16/2021 4:21:16 PM

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

LINKS Review your project results through DOTOLACCESS Have a Question? Ask The Expert

Released to Imaging: 8/28/2024 3:46:21 PMI

•

SDG: Eddy County

Laboratory Job ID: 890-1694-1

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QC Association Summary	13
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Method Summary	17
Sample Summary	18
Chain of Custody	19
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Definitions/Glossary         Client: WSP USA Inc.       Job ID: 890-1694-1         Project/Site: RDX 17-6 314083360.006       SDG: Eddy County         Qualifier Superior Superi			
Project/Site: RDX 17-6 314083360.006       SDG: Eddy County         Qualifiers       Qualifier Surgate recovery exceeds control limits, high biased.       Indicates the analyzed for but not detected.         S1+       Surgate recovery exceeds control limits.       Indicates the analyzed for but not detected.         Qualifier       Qualifier Description       Indicates the analyzed for but not detected.         S1+       Surgate recovery exceeds control limits.       Indicates the analyzed for but not detected.         Qualifier       Qualifier Description       Indicates the analyzed for but not detected.         F1       MS and/or MSD recovery exceeds control limits.       Indicates the analyzed for but not detected.         Qualifier       Qualifier Description       Indicates the analyzed for but not detected.         Glossary       Indicates the analyzed for but not detected.       Indicates the analyzed for but not detected.         SR       Percent Recovery       Scontans Nor Free Liquid       Indicates the analyzed for but not detected.         SR       Percent Recovery       Contains No Free Liquid       Indicates the analyzed for but not detected.         SR       Percent Recovery       Contains No Free Liquid       Indicates the analyzed for but not detected.         SR       Percent Recovery       Contains No Free Liquid       Indicates the analyzed for but not detected.         SR		-	
Qualifiers         Cualifier Description           St+         Surogate recovery exceeds control limits, high biased.           U         Indicates the analyte was analyzed for but not detected.           GC Soani VOA         Califier Description           Qualifier         Qualifier Description           St+         Surogate recovery exceeds control limits. high biased.           U         Indicates the analyte was analyzed for but not detected.           GC Soani VOA         Califier Description           F1         MS and/or MSD recovery exceeds control limits.           U         Indicates the analyte was analyzed for but not detected.           HPLC/IC         Califier Description           Qualifier         Qualifier Description           Indicates the analyte was analyzed for but not detected.         Indicates the analyte was analyzed for but not detected.           GDessary         Indicates the analyte was analyzed for but not detected.         Indicates the analyte was analyzed for but not detected.           GL Sostary         Indicates the analyte was analyzed for but not detected.         Indicates the analyte was analyzed for but not detected.           GL Sostary         Califier Description         Indicates the analyte was analyzed for but not detected.           GL Sostary         Califier Description         Califier Descoretectectectectectectectectectectectectec			
Construction         Construction           Qualifier         Qualifier Description           St+         Surrogate recovery exceeds control limits, high biased.           U         Indicates the analyte was analyzed for but not detected.           GC Semi VOA         Qualifier Description           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 Description           Qualifier         Qualifier Description           U         Indicates the analyte was analyzed for but not detected.           HPLC/IC         Qualifier Description           Qualifier         Qualifier Description           U         Indicates the analyte was analyzed for but not detected.           Glossary         Elsted under the "D" column to designate that the result is reported on a dry weight basis           %R         Percent Recovery           CFL         Contains Free Liquid           CFL         Contains No Free Liquid           DER         Duplicate Error Ratio (normalized absolute difference)           Dil Fac         Dilution Factor           DL         Detection Limit (DoD/DCE)           DL, RAR, RI, IN <t< th=""><th>Project/Site: RL</th><th>JX 17-6 314083360.006 SDG: Eddy Count</th><th>/ /</th></t<>	Project/Site: RL	JX 17-6 314083360.006 SDG: Eddy Count	/ /
Qualifier Description         Surrogate recovery exceeds control limits, high biased.           S1+         Surrogate recovery exceeds control limits, high biased.           U         Indicates the analyte was analyzed for but not detected.           GC Seni VO3         Contains the analyte was analyzed for but not detected.           GC Seni VO3         Contains the analyte was analyzed for but not detected.           U         Indicates the analyte was analyzed for but not detected.           U         Indicates the analyte was analyzed for but not detected.           HPLC/IC         Contains the analyte was analyzed for but not detected.           U         Indicates the analyte was analyzed for but not detected.           GCSsary         Contains the analyte was analyzed for but not detected.           Sited under the "D" column to designate that the result is reported on a dry weight basis           %R         Percent Recovery           CFL         Contains Free Liquid           CNF         Contains No Free Liquid           CNF         Outpuicate Error Ratio (normalized absolute difference)           DI Fac         Dilution Factor           DI Factor Factor Continit (DoD/DOE)           DL, RA, RE, IN         Indicates a Dilution, Re-analysis, Re-extraction, or additional initial metals/anion analysis of the sample	Qualifiers		_ <b> </b>
Qualifier Description         Surrogate recovery exceeds control limits, high biased.           S1+         Surrogate recovery exceeds control limits, high biased.           U         Indicates the analyte was analyzed for but not detected.           GC Seni VO3         Control Contro	GC VOA		
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 Description       Qualifier description     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates the analyte was analyzed for but not detected.       Glossary     Indicates analyte detected. <td>Qualifier</td> <td>Qualifier Description</td> <td>1</td>	Qualifier	Qualifier Description	1
CC Semi VOA         Qualifier Description           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 Description           Qualifier         Qualifier Description           U         Indicates the analyte was analyzed for but not detected.           Glossary         Indicates the analyte was analyzed for but not detected.           Abbreviation         These commonly used abbreviations may or may not be present in this report.           a         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 Faco         Dilution Factor           DI         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)	 S1+	Surrogate recovery exceeds control limits, high biased.	
Qualifier         Qualifier Description           F1         MS and/or MSD recovery exceeds control limits.           J         Indicates the analyte was analyzed for but not detected.           HPLC/IC         Qualifier Description           Qualifier         Qualifier Description           J         Indicates the analyte was analyzed for but not detected.           Clossary         Indicates the analyte was analyzed for but not detected.           Clossary         Edstanding of the standing of the	J	Indicates the analyte was analyzed for but not detected.	
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 Description           Qualifier         Qualifier Description           U         Indicates the analyte was analyzed for but not detected.           Glossary         Indicates the analyte was analyzed for but not detected.           Clossary         Elsed under the "D" column to designate that the result is reported on a dry weight basis           %R         Percent Recovery           CFL         Contains Free Liquid           CPU         Colony Forming Unit           CNF         Contains No Free Liquid           DER         Duplicate Error Ratio (normalized absolute difference)           DII 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	GC Semi VOA		
U       Indicates the analyte was analyzed for but not detected.         HPLC/IC       Qualifier Description         U       Indicates the analyte was analyzed for but not detected.         Glossary       Indicates the analyte was analyzed for but not detected.         Abbreviation       These commonly used abbreviations may or may not be present in this report.         a       Listed under the "D" column to designate that the result is reported on a dry weight basis         %R       Percent Recovery         CFL       Contains Free Liquid         CFL       Contains No Free Liquid         CFL       Contains No Free Liquid         CFL       Contains No Free Liquid         DER       Duplicate Error Ratio (normalized absolute difference)         DII 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)		Qualifier Description	
HPLC/IC         Qualifier Description           J         Indicates the analyte was analyzed for but not detected.           Glossary         Glossary           Abbreviation         These commonly used abbreviations may or may not be present in this report.           a         Listed under the "D" column to designate that the result is reported on a dry weight basis           %R         Percent Recovery           CFL         Contains Free Liquid           CFV         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)	-1	MS and/or MSD recovery exceeds control limits.	
Qualifier DescriptionUIndicates the analyte was analyzed for but not detected.GlossaryAbbreviationThese commonly used abbreviations may or may not be present in this report.aListed under the "D" column to designate that the result is reported on a dry weight basis%RPercent RecoveryCFLContains Free LiquidCFVColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)	J	Indicates the analyte was analyzed for but not detected.	
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)	HPLC/IC		
Glossary         Abbreviation       These commonly used abbreviations may or may not be present in this report.         n       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)	Qualifier	Qualifier Description	
Abbreviation       These commonly used abbreviations may or may not be present in this report.         n       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)	U	Indicates the analyte was analyzed for but not detected.	
Initial and the second provide the	Glossary		
%RPercent RecoveryCFLContains Free LiquidCFUColony Forming UnitCFUContains No Free LiquidCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)DI FacDilution FactorDL FacDideteror Liquid, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDescion Level Concentration (Radiochemistry)	Abbreviation	These commonly used abbreviations may or may not be present in this report.	
CFLContains Free LiquidCFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, IMIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)	¤		
CFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, IMIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)	%R		
CNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)			
DERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)			
Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)			
DLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)	DER		
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)		Dilution Factor	
DLC Decision Level Concentration (Radiochemistry)			
	DL		
EDL Estimated Detection Limit (Dioxin)	DL DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
	DL DL, RA, RE, IN DLC	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample Decision Level Concentration (Radiochemistry)	
	DL DL, RA, RE, IN DLC	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample Decision Level Concentration (Radiochemistry)	

Limit of Quantitation (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

EPA recommended "Maximum Contaminant Level"

Not Detected at the reporting limit (or MDL or EDL if shown)

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry)

LOD LOQ

MCL

MDA

MDC MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ

TNTC

RL

4

5

### **Case Narrative**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006 Job ID: 890-1694-1 SDG: Eddy County

#### Job ID: 890-1694-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-1694-1

#### Receipt

The samples were received on 12/9/2021 4:07 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 2.2°C

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-14447/5-B). Evidence of matrix interferences is not obvious.

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

#### GC Semi VOA

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.

RL

0.00200

0.00200

0.00200

0.00401

0.00200

0.00401

Limits

70 - 130

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

12/13/21 07:30

12/13/21 07:30

12/13/21 07:30

12/13/21 07:30

12/13/21 07:30

12/13/21 07:30

Prepared

12/13/21 07:30

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00401 U

<0.00200 U

<0.00401 U

%Recovery Qualifier

113

### **Client Sample ID: SW01**

Date Collected: 12/09/21 10:45 Date Received: 12/09/21 16:07

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

Job ID: 890-1694-1 SDG: Eddy County

### Lab Sample ID: 890-1694-1

Analyzed

12/13/21 16:43

12/13/21 16:43

12/13/21 16:43

12/13/21 16:43

12/13/21 16:43

12/13/21 16:43

Analyzed

Matrix: Solid

594-1 Solid	3
	4
	5
Dil Fac 1	6
1	7
1 1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13

12/13/21 16:43	1	
12/13/21 16:43	1	
Analyzed	Dil Fac	
12/14/21 10:16	1	
Analyzed	Dil Fac	1
Analyzed 12/13/21 12:32	Dil Fac	1 1
		1 1
12/13/21 12:32	1	1

1,4-Difluorobenzene (Surr)	112		70 - 130				12/13/21 07:30	12/13/21 16:43	1	
Method: Total BTEX - Total BTEX 0	Calculation									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/14/21 10:16	1	
Method: 8015 NM - Diesel Range C	Organics (DR	O) (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9		mg/Kg			12/13/21 12:32	1	
Method: 8015B NM - Diesel Range										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		12/13/21 08:26	12/13/21 17:00	1	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		12/13/21 08:26	12/13/21 17:00	1	
C10-C28)										
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/13/21 08:26	12/13/21 17:00	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	78		70 - 130				12/13/21 08:26	12/13/21 17:00	1	
o-Terphenyl	96		70 - 130				12/13/21 08:26	12/13/21 17:00	1	
Method: 300.0 - Anions, Ion Chron	natography -	Soluble								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	183		4.98		mg/Kg			12/14/21 20:09	1	

**Client Sample ID: SW02** Date Collected: 12/09/21 12:25 Date Received: 12/09/21 16:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Orga	nic Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/13/21 07:30	12/13/21 17:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				12/13/21 07:30	12/13/21 17:03	1

Eurofins Xenco, Carlsbad

Lab Sample ID: 890-1694-2

Matrix: Solid

### **Client Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

### Client Sample ID: SW02

Date Collected: 12/09/21 12:25

Date Received: 12/09/21 16:07

Sample Depth: 0 - 4

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	106		70 - 130				12/13/21 07:30	12/13/21 17:03	
Method: Total BTEX - Total BTEX	<b>X</b> Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/14/21 10:16	
Method: 8015 NM - Diesel Range	e Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.8	U	49.8		mg/Kg			12/13/21 12:32	
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/13/21 08:26	12/13/21 17:21	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/13/21 08:26	12/13/21 17:21	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/13/21 08:26	12/13/21 17:21	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	70		70 - 130				12/13/21 08:26	12/13/21 17:21	
o-Terphenyl	87		70 - 130				12/13/21 08:26	12/13/21 17:21	
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	137		4.95		mg/Kg			12/14/21 20:20	
lient Sample ID: SW03							Lab San	nple ID: 890-	1694-

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/13/21 07:30	12/13/21 17:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130				12/13/21 07:30	12/13/21 17:24	1
1,4-Difluorobenzene (Surr)	107		70 - 130				12/13/21 07:30	12/13/21 17:24	1
Method: Total BTEX - Total B	<b>FEX Calculation</b>								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/14/21 10:16	1
Method: 8015 NM - Diesel Rar	nge Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0		mg/Kg			12/13/21 12:32	1

Eurofins Xenco, Carlsbad

Job ID: 890-1694-1 SDG: Eddy County

# Lab Sample ID: 890-1694-2

Matrix: Solid

5
# **Client Sample Results**

RL

50.0

50.0

50.0

Limits

MDL Unit

mg/Kg

mg/Kg

mg/Kg

D

Prepared

12/13/21 08:26

12/13/21 08:26

12/13/21 08:26

Prepared

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

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

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

%Recovery Qualifier

## **Client Sample ID: SW03**

Date Collected: 12/09/21 13:00 Date Received: 12/09/21 16:07

Sample Depth: 0 - 4

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate

(GRO)-C6-C10

# Lab Sample ID: 890-1694-3

Analyzed

12/13/21 17:42

12/13/21 17:42

12/13/21 17:42

Analyzed

Matrix: Solid

Dil Fac

1

1

1

Dil Fac

Job ID: 890-1694-1

SDG: Eddy County

5

1-Chlorooctane	75		70 - 130				12/13/21 08:26	12/13/21 17:42	1
o-Terphenyl	93		70 - 130				12/13/21 08:26	12/13/21 17:42	1
Method: 300.0 - Anions, Ion (	Chromatography - S	Soluble							
Method: 300.0 - Anions, Ion ( Analyte	Chromatography - S Result		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	• • • •		RL	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

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

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1694-1	SW01	113	112
890-1694-2	SW02	113	106
890-1694-3	SW03	117	107
890-1695-A-1-A MS	Matrix Spike	104	96
890-1695-A-1-B MSD	Matrix Spike Duplicate	101	98
LCS 880-14447/1-A	Lab Control Sample	108	100
LCSD 880-14447/2-A	Lab Control Sample Dup	105	101
MB 880-14447/5-B	Method Blank	132 S1+	105
<b>•</b> • • •			
Surrogate Legend			

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1694-1	SW01	78	96
890-1694-2	SW02	70	87
890-1694-3	SW03	75	93
890-1695-A-1-F MS	Matrix Spike	84	83
890-1695-A-1-G MSD	Matrix Spike Duplicate	88	88
LCS 880-14599/2-A	Lab Control Sample	89	97
LCSD 880-14599/3-A	Lab Control Sample Dup	118	118
MB 880-14599/1-A	Method Blank	94	119

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

#### Job ID: 890-1694-1 SDG: Eddy County

Prep Type: Total/NA

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

Lab Sample ID: MB 880-14447/5-B Matrix: Solid Analysis Batch: 14589							Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/13/21 07:30	12/13/21 10:34	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130				12/13/21 07:30	12/13/21 10:34	1
1,4-Difluorobenzene (Surr)	105		70 - 130				12/13/21 07:30	12/13/21 10:34	1
Lab Sample ID: LCS 880-14447/1-A Matrix: Solid						C	lient Sample I	D: Lab Control Prep Type: 1	

#### Analysis Batch: 14589

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09495		mg/Kg		95	70 - 130	
Toluene	0.100	0.08907		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08816		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1830		mg/Kg		92	70 - 130	
o-Xylene	0.100	0.09232		mg/Kg		92	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

#### Lab Sample ID: LCSD 880-14447/2-A

#### Matrix: Solid

Analysis Batch: 14589							Prep	Batch:	14447
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08985		mg/Kg		90	70 - 130	6	35
Toluene	0.100	0.08570		mg/Kg		86	70 - 130	4	35
Ethylbenzene	0.100	0.08480		mg/Kg		85	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1768		mg/Kg		88	70 - 130	3	35
o-Xylene	0.100	0.08732		mg/Kg		87	70 - 130	6	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

# Lab Sample ID: 890-1695-A-1-B MSD

# Matrix: Solid

Analysis Batch: 14589									Pre	p Batch:	14447
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.08933		mg/Kg					
Toluene	<0.00200	U	0.0990	0.08357		mg/Kg					

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Prep Type: Total/NA

Prep Batch: 14447

Prep Type: Total/NA

**Client Sample ID: Matrix Spike Duplicate** 

Client Sample ID: Lab Control Sample Dup

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006 Job ID: 890-1694-1 SDG: Eddy County

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

Lab Sample ID: 890-1695-A-1- Matrix: Solid	B MSD								Clien	t Sa	mple ID	: Matrix S Prep	pike Du Type: To	-
Analysis Batch: 14589													Batch	
,, <b>,</b>	Sample S	Samr	ble	Spike	MSD	MSD	)					%Rec.		RP
Analyte	Result C			Added	Result			Unit		D	%Rec	Limits	RPD	
Ethylbenzene	<0.00200	· ·		0.0990	0.08153	Quu		mg/Kg		<u> </u>	///////////////////////////////////////			
m-Xylene & p-Xylene	<0.00400 L			0.198	0.1734			mg/Kg						
o-Xylene	<0.00200 L	J		0.0990	0.08500			mg/Kg						
	MSD N	иsd												
Surrogate		Quali	ifior	Limits										
4-Bromofluorobenzene (Surr)	101	guun		70 - 130										
1,4-Difluorobenzene (Surr)	98			70 - 130 70 - 130										
1,4-Dilluorobenzene (Surr)	90			70 - 730										
Lab Sample ID: 890-1695-A-1-	AMS										Client	Sample ID	): Matrix	x Spik
Matrix: Solid													Type: To	
												Tich	Type. It	otaint
Analysis Batch: 14589														
	MS M	ИS												
Surrogate	%Recovery G	Quali	ifier	Limits										
4-Bromofluorobenzene (Surr)	104			70 - 130										
1,4-Difluorobenzene (Surr)	96			70 - 130										
	50			10-100										
Lab Sample ID: MB 880-14599	/ <b>1-A</b>										Client S	ample ID:	Method	d Blan
Matrix: Solid	// <b>1-A</b>										Client S		Method Type: To Batch:	otal/N
Lab Sample ID: MB 880-14599 Matrix: Solid Analysis Batch: 14594		МВ	мв								Client S	Prep	Type: To	otal/N
Matrix: Solid			MB Qualifier	RL		MDL	Unit		D		Client S epared	Prep	Type: To Batch:	otal/N/ : 1459
Matrix: Solid Analysis Batch: 14594	Res		Qualifier	<b></b> 50.0	·	MDL	Unit mg/Kg	3		Pr		Prep Prep Analyz	Type: To Batch: zed	otal/N/ : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 <sup>Analyte</sup>	Res	ult	Qualifier		·	MDL		]		Pr	epared	Prep Prep Analyz	Type: To Batch: zed	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics	Res <50	ult	Qualifier U			MDL				<b>Pr</b> 12/13	epared	Prep Prep Analyz	Type: To b Batch: zed 09:22	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10	Res <50	o.0	Qualifier U	50.0		MDL	mg/K			<b>Pr</b> 12/13	<b>epared</b> 3/21 08:26	Prep Prep Analyz 12/13/21	Type: To b Batch: zed 09:22	otal/N/ : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Res <50	o.0	Qualifier U	50.0		MDL	mg/K	9		<b>Pr</b> 12/13 12/13	<b>epared</b> 3/21 08:26	Prep Prep Analyz 12/13/21 12/13/21	Type: To b Batch: 2ed 09:22 09:22	otal/N/
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Res <5( <5(	<b>sult</b> 0.0 0.0 0.0	Qualifier U U	50.0		MDL	mg/Kg	9		<b>Pr</b> 12/13 12/13	<b>epared</b> 3/21 08:26 3/21 08:26	Prep Prep Analyz 12/13/21 12/13/21	Type: To b Batch: 2ed 09:22 09:22	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Res <50 <50 <50	<b>Sult</b> 0.0 0.0 0.0 <b>MB</b>	Qualifier U U MB	50.0 50.0 50.0		MDL	mg/Kg	9		<b>Pr</b> 12/13 12/13 12/13	<b>epared</b> 3/21 08:26 3/21 08:26 3/21 08:26	Prep Prep 12/13/21 12/13/21 12/13/21	Type: To b Batch: 2ed 09:22 09:22 09:22	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Res <50 <50 <50 <50 %Recove	sult 0.0 0.0 0.0 MB ery	Qualifier U U	50.0 50.0 50.0 <i>Limits</i>		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 epared	Prep Prep 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 Analyz	Type: To           D Batch:           2ed           09:22           09:22           09:22           200:22           200:22	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Res <50 <50 <50 <50 %Recove	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 epared 3/21 08:26	Prep Prep 12/13/21 12/13/21 12/13/21 12/13/21 <i>Analy</i> : 12/13/21	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22	otal/N, : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Res <50 <50 <50 <50 %Recove	sult 0.0 0.0 0.0 MB ery	Qualifier U U MB	50.0 50.0 50.0 <i>Limits</i>		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 epared	Prep Prep 12/13/21 12/13/21 12/13/21 12/13/21 <i>Analy</i> : 12/13/21	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22	otal/N : 1459 Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26	Prep Prep Analy: 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N/ : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26	Prep Prep - Analyz 12/13/21 12/13/21 12/13/21 - Analyz 12/13/21 12/13/21 ID: Lab C	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130		MDL	mg/Kg	9		Pr 12/13 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26	Prep Prep Analyz 12/13/21	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130			mg/Kg mg/Kg	9		Pr 12/13 12/13 12/13 12/13 12/13	epared 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26 3/21 08:26	Prep Prep 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130	LCS	LCS	mg/Kg mg/Kg	3		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared 3/21 08:26 3/21 08:26 3/21 08:26 9/21 08:26 3/21 08:26 Sample	Prep Prep Analyz 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep Prep %Rec.	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	LCS Result	LCS	mg/Kg mg/Kg	Unit		Pr 12/13 12/13 12/13 12/13 12/13	epared //21 08:26 3/21 08:26 a/21 08:26 epared 3/21 08:26 Sample %Rec	Prep Prep Analyz 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N/ : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130	LCS	LCS	mg/Kg mg/Kg	3		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared 3/21 08:26 3/21 08:26 3/21 08:26 9/21 08:26 3/21 08:26 Sample	Prep Prep Analyz 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep Prep %Rec.	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 <b>Spike</b> Added 1000	LCS Result 804.6	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared //21 08:26 3/21 08:26 a/21 08:26 a/21 08:26 a/21 08:26 <b>Sample</b> %Rec 80 -	Prep Prep Analy: 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits 70 - 130	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Res <50 <50 <50 // // // // // // // // // // // //////	<b>sult</b> 0.0 0.0 0.0 <b>MB</b> ery 94	Qualifier U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added	LCS Result	LCS	mg/Kg mg/Kg	Unit		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared //21 08:26 3/21 08:26 a/21 08:26 epared 3/21 08:26 Sample %Rec	Prep Prep Analyz 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Res <50 <50 <50 // // // // // // // // // // // //////	<b>Sult</b> 0.0 0.0 0.0 <b>MB</b> <b>ery</b> 94 119	Qualifier U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 <b>Spike</b> Added 1000	LCS Result 804.6	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared //21 08:26 3/21 08:26 a/21 08:26 a/21 08:26 a/21 08:26 <b>Sample</b> %Rec 80 -	Prep Prep Analy: 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits 70 - 130	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1459 Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Res <5( <5( %Recove 9/2-A	<b>Sult</b> 0.0 0.0 0.0 <b>MB</b> <b>ery</b> 94 119	Qualifier U U MB Qualifier	50.0 50.0 50.0 50.0 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 1000	LCS Result 804.6	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared //21 08:26 3/21 08:26 a/21 08:26 a/21 08:26 a/21 08:26 <b>Sample</b> %Rec 80 -	Prep Prep Analy: 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits 70 - 130	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa
Matrix: Solid Analysis Batch: 14594 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Res <5( <5( %Recove 9/2-A	<b>Sult</b> 0.0 0.0 0.0 <b>MB</b> <b>ery</b> 94 119	Qualifier U U MB Qualifier	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 <b>Spike</b> Added 1000	LCS Result 804.6	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg		Pr 12/13 12/13 12/13 12/13 12/13 12/13 ent	epared //21 08:26 3/21 08:26 a/21 08:26 a/21 08:26 a/21 08:26 <b>Sample</b> %Rec 80 -	Prep Prep Analy: 12/13/21 12/13/21 12/13/21 12/13/21 12/13/21 ID: Lab C Prep %Rec. Limits 70 - 130	Type: To           D Batch:           2ed           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22           09:22	otal/N. : 1459 Dil Fa Dil Fa

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

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

Lab Sample ID: LCSD 880-1 Matrix: Solid								-	ab Contro_ Prep T	ype: Tot	
Analysis Batch: 14594										Batch:	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics			1000	951.7		mg/Kg		95	70 - 130	17	20
(GRO)-C6-C10											_
Diesel Range Organics (Over			1000	1000		mg/Kg		100	70 - 130	15	20
C10-C28)											
		LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		Quanner	70 - 130								
o-Terphenyl	118		70 - 130 70 - 130								
- Terphenyi	110		70 - 130								
Lab Sample ID: 890-1695-A-	-1-F MS							Client	Sample ID:	Matrix	Snike
Matrix: Solid										ype: Tot	
Analysis Batch: 14594										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec.	Batom	1400
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9		997	1257		mg/Kg		124	70 - 130		
(GRO)-C6-C10		-									
Diesel Range Organics (Over	<49.9	U F1	997	1250		mg/Kg		125	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	83		70 - 130								
-											
Lab Sample ID: 890-1695-A-	-1-G MSD					CI	ient Sa	mple ID	: Matrix Sp	ike Dup	licate
Matrix: Solid										ype: Tot	
Analysis Batch: 14594										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9		999	1307		mg/Kg		128	70 - 130	4	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U F1	999	1343	F1	mg/Kg		134	70 - 130	7	20
C10-C28)											
		MSD									
	MSD										
Surrogate			Limits								
Surrogate 1-Chlorooctane	MSD %Recovery 		Limits								

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14499/1-A Matrix: Solid Analysis Batch: 14775							Client S	ample ID: Metho Prep Type:	
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/14/21 15:15	1

Project/Site: RDX 17-6 314083360.006

Client: WSP USA Inc.

Job ID: 890-1694-1 SDG: Eddy County

# Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880	)-14499/2-A						Client	Sample	D: Lab C	ontrol Sa	ample
Matrix: Solid										Type: So	
Analysis Batch: 14775											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	268.0		mg/Kg		107	90 - 110		
- Lab Sample ID: LCSD 88	80-14499/3-A					Clier	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid								- -	Prep	Type: So	oluble
Analysis Batch: 14775											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	271.0		mg/Kg		108	90 - 110	1	20
_ Lab Sample ID: 890-168	9-A-8-F MS							Client	Sample ID	· Matrix	Snike
Matrix: Solid								onom		Type: So	
Analysis Batch: 14775									Trop	Type: O	olubic
Principolo Baton. 14770	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	135		249	404.7		mg/Kg		109	90 - 110		
Lab Sample ID: 890-168	9-A-8-F MSD					Cli	ient Sa	ample IE	): Matrix S	oike Dup	olicate
Matrix: Solid										Type: S	
Analysis Batch: 14775											
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	135		249	400.3		mg/Kg		107	90 - 110	1	20

**QC** Association Summary

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

Job ID: 890-1694-1 SDG: Eddy County

# GC VOA

#### Prep Batch: 14447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1694-1	SW01	Total/NA	Solid	5035	
890-1694-2	SW02	Total/NA	Solid	5035	
890-1694-3	SW03	Total/NA	Solid	5035	
MB 880-14447/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-14447/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-14447/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1695-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 14589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1694-1	SW01	Total/NA	Solid	8021B	14447	
890-1694-2	SW02	Total/NA	Solid	8021B	14447	
890-1694-3	SW03	Total/NA	Solid	8021B	14447	
MB 880-14447/5-B	Method Blank	Total/NA	Solid	8021B	14447	
LCS 880-14447/1-A	Lab Control Sample	Total/NA	Solid	8021B	14447	
LCSD 880-14447/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	14447	
890-1695-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B		
890-1695-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	14447	
Analysis Batch: 14761						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	

890-1694-1	SW01	Total/NA	Solid	Total BTEX	
890-1694-2	SW02	Total/NA	Solid	Total BTEX	
890-1694-3	SW03	Total/NA	Solid	Total BTEX	

## GC Semi VOA

#### Analysis Batch: 14594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1694-1	SW01	Total/NA	Solid	8015B NM	14599
890-1694-2	SW02	Total/NA	Solid	8015B NM	14599
890-1694-3	SW03	Total/NA	Solid	8015B NM	14599
MB 880-14599/1-A	Method Blank	Total/NA	Solid	8015B NM	14599
LCS 880-14599/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	14599
LCSD 880-14599/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	14599
890-1695-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	14599
890-1695-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	14599

#### Prep Batch: 14599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-1694-1	SW01	Total/NA	Solid	8015NM Prep	
890-1694-2	SW02	Total/NA	Solid	8015NM Prep	
890-1694-3	SW03	Total/NA	Solid	8015NM Prep	
MB 880-14599/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-14599/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-14599/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1695-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1695-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

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Job ID: 890-1694-1 SDG: Eddy County

# GC Semi VOA

#### Analysis Batch: 14652

· · · · · · · · · · · · · · · · · · ·	Ргер Туре	Matrix	Method	Prep Batch
SW01	Total/NA	Solid	8015 NM	
SW02	Total/NA	Solid	8015 NM	
SW03	Total/NA	Solid	8015 NM	
		SW02 Total/NA	SW02 Total/NA Solid	SW02 Total/NA Solid 8015 NM

# HPLC/IC

#### Leach Batch: 14499

-						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	8
890-1694-1	SW01	Soluble	Solid	DI Leach		
890-1694-2	SW02	Soluble	Solid	DI Leach		0
890-1694-3	SW03	Soluble	Solid	DI Leach		3
MB 880-14499/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-14499/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-14499/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-1689-A-8-E MS	Matrix Spike	Soluble	Solid	DI Leach		
890-1689-A-8-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 14775						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	13
890-1694-1	SW01	Soluble	Solid	300.0	14499	

#### Analysis Batch: 14775

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
890-1694-1	SW01	Soluble	Solid	300.0	14499
890-1694-2	SW02	Soluble	Solid	300.0	14499
890-1694-3	SW03	Soluble	Solid	300.0	14499
MB 880-14499/1-A	Method Blank	Soluble	Solid	300.0	1449
LCS 880-14499/2-A	Lab Control Sample	Soluble	Solid	300.0	1449
LCSD 880-14499/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1449
890-1689-A-8-E MS	Matrix Spike	Soluble	Solid	300.0	1449
890-1689-A-8-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	1449

Project/Site: RDX 17-6 314083360.006

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Job ID: 890-1694-1 SDG: Eddy County

#### Lab Sample ID: 890-1694-1 Matrix: Solid

Lab Sample ID: 890-1694-2

Lab Sample ID: 890-1694-3

Matrix: Solid

Matrix: Solid

Client Sample ID: SW01 Date Collected: 12/09/21 10:45 Date Received: 12/09/21 16:07

Client: WSP USA Inc.

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	14447	12/13/21 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14589	12/13/21 16:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	14599	12/13/21 08:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14594	12/13/21 17:00	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	14499	12/10/21 12:24	СН	XEN MID
Soluble	Analysis	300.0		1			14775	12/14/21 20:09	СН	XEN MID

# Client Sample ID: SW02

# Date Collected: 12/09/21 12:25

Date Received: 12/09/21 16:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	14447	12/13/21 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14589	12/13/21 17:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	14599	12/13/21 08:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14594	12/13/21 17:21	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	14499	12/10/21 12:24	СН	XEN MID
Soluble	Analysis	300.0		1			14775	12/14/21 20:20	СН	XEN MID

#### Client Sample ID: SW03

# Date Collected: 12/09/21 13:00

#### Date Received: 12/09/21 16:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	14447	12/13/21 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14589	12/13/21 17:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14761	12/14/21 10:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	14599	12/13/21 08:26	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14594	12/13/21 17:42	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	14499	12/10/21 12:24	СН	XEN MID
Soluble	Analysis	300.0		1			14775	12/15/21 16:15	СН	XEN MID

#### Laboratory References:

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

# Accreditation/Certification Summary

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006

#### Laboratory: Eurofins Xenco, Midland

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

thority	P	rogram	Identification Number	Expiration Date
as	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, b	ut the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for
the agency does not of	fer certification.	,		,,
the agency does not of Analysis Method	•	Matrix	Analyte	
the agency does not of	fer certification.	,		

Eurofins Xenco, Carlsbad

Job ID: 890-1694-1 SDG: Eddy County
3
4
5
6
7
8
9

## **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006 Job ID: 890-1694-1 SDG: Eddy County

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

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

# **Sample Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 314083360.006 Job ID: 890-1694-1 SDG: Eddy County

	Depth	Received	Collected	Matrix	Client Sample ID	Lab Sample ID
	0 - 4	12/09/21 16:07	12/09/21 10:45	Solid	SW01	890-1694-1
	0 - 4	12/09/21 16:07	12/09/21 12:25	Solid	SW02	890-1694-2
	0 - 4	12/09/21 16:07	12/09/21 13:00	Solid	SW03	890-1694-3
•						

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🔅 eurofins	fins 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	DCY (214) 902-0300 17X (210) 509-3334 (806) 794-1296 1(575) 988-3199	Work Order No:	er No:
Project Manager:	JOSEPH HERNANDER	Bill to: (if different)	JIM PALEY	X	Work	Work Order Comments
Company Name:	C		WPX		Program: UST/PST PRI	UST/PST PRP Brownfields RRC
Address:		Address:		BUENA VISTA DR	State of Project:	
City, State ZIP:	TUD!	ŋ	2	Ø1288	Reporting: Level II Level III	
Phone:	2	Email: anna, b	byers @ wsp. 4	-MBA	Deliverables: EDD	ADaPT D Other:
Project Name:	RDX 17-6	Turn Around	_	ANALYSIS REQUEST	ST	Preservative Codes
Project Number:	314033600,0006	KRoutine Rush	Pres. Code			None: NO DI Water: H <sub>2</sub> O
Project Location:		Due Date:	)			Cool: Cool MeOH: Me
Sampler's Name:	Byers	TAT starts the day received by				
PO #:	A.	the lab, if received by 4:30pm	sm 3)			H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank: Yes No	Wet Ice: Yes No	216			H <sub>3</sub> PO 4: HP
Samples Received Intact:	Yes No	TO: INUT ODT	8,48 3,49			NaHSO ": NABIS
Cooler Custody Seals:	Yes No N/A Correction Factor:	50	17 A 8			Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ; NaSO <sub>3</sub>
Sample Custody Seals: Total Containers:	Yes No N/A Temperature Reading: Corrected Temperature:	mperature: 2.2	-	890-1694 Cital		NaOH+Ascorbic Acid: SAPC
Sample Identification	fication Matrix Date Sampled	Time Depth Grab/ Sampled Comp	TP4 BTE, Chio			Sample Comments
Swall	-	1-4	- × × ×			Cost Center
Shida	S 12/19/21	1225 0-41	1 X X X			106113700
SW23	S 12/19/21	1300 5-41 2	~ × × ×			
			>			
Total 200.7 / 6010 Circle Method(s) ar	200.8 / 6020: nd Metal(s) to be analyzed	8RCRA 13PPM Texas 11 AI S TCLP / SPLP 6010 : 8RCRA	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb CRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo		Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Ni Se Ag TI U Hg: 1631	SiO <sub>2</sub> Na Sr TI Sn U V Zn 1631/245.1/7470/7471
Notice: Signature of this docu of service. Eurofins Xenco will of Eurofins Xenco. A minimum	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 lable 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 mego	IId purchase order from client company sume any responsibility for any losses of a charge of \$5 for each sample submits	to Eurofins Xenco, its affiliates and sub r expenses incurred by the client if suc ted to Eurofins Xenco, but not analyze	contractors. It assigns standard terms h losses are due to circumstances beyc d. These terms will be enforced unless	d terms and conditions ces beyond the control J unless previously negotiated.	
Relinquished by: (Signature)	(Signature) A Received by	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	e) Received by: (Signature)	signature) Date/Time
anna	o ( Ww	FOON 12	12/9/21 2			
h W	0		4			

l l plane

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Job Number: 890-1694-1 SDG Number: Eddy County

List Source: Eurofins Xenco, Carlsbad

## Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1694 List Number: 1

Creator: Clifton, Cloe

<6mm (1/4").

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	N/A	

Job Number: 890-1694-1 SDG Number: Eddy County

List Source: Eurofins Xenco, Midland

List Creation: 12/13/21 07:53 AM

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1694 List Number: 2 Creator: Lowe, Katie

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1699-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

# For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 12/20/2021 4:17:55 PM

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

Review your project results through Total Access Have a Question? Ask The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3546:21 PMM

LINKS

Laboratory Job ID: 890-1699-1 SDG: 31403360.006

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# **Definitions/Glossary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

Project/Site: RI	DX 17-6 SDG: 31403360.006	
Qualifiers		
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	- 2
GC Semi VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
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 Minimum Level (Dioxin)	
ML 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	
	Positive / Present Practical Quantitation Limit	
PQL		
PQL PRES	Practical Quantitation Limit	
PQL PRES QC	Practical Quantitation Limit Presumptive	
PQL PRES QC RER	Practical Quantitation Limit Presumptive Quality Control	
PQL PRES QC RER RL	Practical Quantitation Limit Presumptive Quality Control Relative Error Ratio (Radiochemistry)	
PQL PRES QC RER RL RPD	Practical Quantitation Limit Presumptive Quality Control Relative Error Ratio (Radiochemistry) Reporting Limit or Requested Limit (Radiochemistry)	
POS PQL PRES QC RER RL RPD TEF TEQ	Practical Quantitation Limit Presumptive Quality Control Relative Error Ratio (Radiochemistry) Reporting Limit or Requested Limit (Radiochemistry) Relative Percent Difference, a measure of the relative difference between two points	

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

#### Job ID: 890-1699-1

#### Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1699-1

#### Receipt

The sample was received on 12/13/2021 12:31 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-14776 and analytical batch 880-14800 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: (880-9270-A-1-F MSD). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike (MS) recovery for preparation batch 880-14833 and analytical batch 880-14982 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. The associated sample is: SW04 (890-1699-1).

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

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# **Client Sample Results**

Job ID: 890-1699-1 SDG: 31403360.006

## Client Sample ID: SW04

Client: WSP USA Inc.

Project/Site: RDX 17-6

Sample Depth: 0 - 4

Date Collected: 12/10/21 09:45 Date Received: 12/13/21 12:31

# Lab Sample ID: 890-1699-1

Matrix: Solid

Method: 8021B - Volatile Organic Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0370		0.00198		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
Toluene	0.0642		0.00198		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
Ethylbenzene	0.00482		0.00198		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
m-Xylene & p-Xylene	0.0144		0.00396		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
o-Xylene	0.00334		0.00198		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
Xylenes, Total	0.0177		0.00396		mg/Kg		12/14/21 07:30	12/14/21 12:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				12/14/21 07:30	12/14/21 12:25	1
1,4-Difluorobenzene (Surr)	114		70 - 130				12/14/21 07:30	12/14/21 12:25	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.124		0.00396		mg/Kg			12/20/21 15:38	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/17/21 09:16	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (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		12/14/21 11:31	12/15/21 18:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/14/21 11:31	12/15/21 18:20	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/14/21 11:31	12/15/21 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				12/14/21 11:31	12/15/21 18:20	1
o-Terphenyl	106		70 - 130				12/14/21 11:31	12/15/21 18:20	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	162		4.98		mg/Kg	_		12/19/21 22:26	1

Client: WSP USA Inc. Project/Site: RDX 17-6 Page 165 of 481

Job ID: 890-1699-1 SDG: 31403360.006

Prep Type: Total/NA

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
890-1699-1	SW04	107	114		
890-1699-1 MS	SW04	103	99		6
890-1699-1 MSD	SW04	107	104		
LCS 880-14660/1-A	Lab Control Sample	99	105		
LCSD 880-14660/2-A	Lab Control Sample Dup	104	108		
MB 880-14660/5-A	Method Blank	117	102		8
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				9

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) 880-9270-A-1-E MS Matrix Spike 73 79 880-9270-A-1-F MSD Matrix Spike Duplicate 60 S1-65 S1-890-1699-1 SW04 106 89 LCS 880-14776/2-A Lab Control Sample 98 102 LCSD 880-14776/3-A Lab Control Sample Dup 103 102 MB 880-14776/1-A Method Blank 89 104

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc.

Project/Site: RDX 17-6

Job ID: 890-1699-1 SDG: 31403360.006

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

Lab Sample ID: MB 880-14660 Matrix: Solid Analysis Batch: 14700	/5-A								Client S	ample ID: M Prep Ty Prep		tal/N/
Analysis Batch. 14700	м	B MB								Ticp	Duton.	1400
Analyte		lt Qualifier	RL		MDL Uni	t	D	Pr	repared	Analyze	d	Dil Fa
Benzene	<0.0020	0 U	0.00200		mg	/Kg			4/21 07:30			
Toluene	<0.0020		0.00200		mg	-			4/21 07:30			
Ethylbenzene	<0.0020		0.00200		mg	-			4/21 07:30			
m-Xylene & p-Xylene	<0.0040		0.00400		mg				4/21 07:30			
o-Xylene	< 0.0020		0.00200		mg				4/21 07:30			
Xylenes, Total	< 0.0040		0.00400		mg	-			4/21 07:30			
	0.0010		0.00100		ing	i g		12/1			0.11	
	М	B MB										
Surrogate	%Recover	ry Qualifier	Limits					Pi	repared	Analyze	ed	Dil Fa
4-Bromofluorobenzene (Surr)	11	7	70 - 130					12/14	4/21 07:30	12/14/21 1	0:41	
1,4-Difluorobenzene (Surr)	10	)2	70 - 130					12/14	4/21 07:30	12/14/21 1	0:41	
Lab Sample ID: LCS 880-14660 Matrix: Solid Analysis Batch: 14700	D/1-A		Spike	LCS	LCS		С	lient	Sample	ID: Lab Co Prep Ty Prep %Rec.		tal/N
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.08602	Quanner	mg/Kg			86	70 - 130		
Toluene			0.100	0.07927		mg/Kg			79	70 - 130		
Ethylbenzene			0.100	0.07784		mg/Kg			78	70 - 130		
						mg/Kg			70	70 - 130		
m Yulana & n Yulana												
m-Xylene & p-Xylene			0.200	0.1589								
n-Xylene & p-Xylene o-Xylene			0.200 0.100	0.1589		mg/Kg			78	70 - 130 70 - 130		
	LCS LC	cs										
		CS ualifier										
o-Xylene Surrogate			0.100									
o-Xylene	%Recovery Q		0.100 <i>Limits</i>									
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 99 99 105		0.100 Limits 70 - 130			mg/Kg			78	70 - 130		
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146	%Recovery 99 99 105		0.100 Limits 70 - 130			mg/Kg	lient	Sam	78	70 - 130 .ab Control	-	
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid	%Recovery 99 99 105		0.100 Limits 70 - 130			mg/Kg	lient	Sam	78	70 - 130 .ab Control Prep Ty	ype: To	tal/N
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146	%Recovery 99 99 105		0.100 <i>Limits</i> 70 - 130 70 - 130	0.07845		mg/Kg	lient	Sam	78	70 - 130 .ab Control Prep Ty Prep	-	tal/N 1466
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700	%Recovery 99 99 105		0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	0.07845 LCSD		mg/Kg	lient		78 ple ID: L	70 - 130 .ab Control Prep Ty Prep %Rec.	ype: To Batch:	tal/N 1466 RP
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700	%Recovery 99 99 105		0.100 <i>Limits</i> 70 - 130 70 - 130 Spike Added	0.07845 LCSD Result	LCSD Qualifier	mg/Kg	lient	Sam	78	70 - 130 .ab Control Prep Ty Prep %Rec. Limits	ype: To	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene	%Recovery 99 99 105		0.100 Limits 70 - 130 70 - 130 Spike Added 0.100	0.07845 LCSD Result 0.1000		mg/Kg	lient		78 <b>ple ID: L</b> <u>%Rec</u> 100	70 - 130 .ab Control Prep Ty %Rec. Limits 70 - 130	ype: To Batch: RPD 15	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene	%Recovery 99 99 105		0.100 Limits 70 - 130 70 - 130 Spike Added 0.100 0.100	0.07845 LCSD Result 0.1000 0.09082		mg/Kg — Unit mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <u>%Rec</u> 100 91	70 - 130 .ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 15 14	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene	%Recovery 99 99 105		0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	0.07845 LCSD Result 0.1000 0.09082 0.08966		mg/Kg C Unit mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <u>%Rec</u> 100	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	%Recovery 99 99 105		0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene	%Recovery 99 99 105		0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	0.07845 LCSD Result 0.1000 0.09082 0.08966		mg/Kg C Unit mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <u>%Rec</u> 100 91 90	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	%Recovery         Qi           99         105           60/2-A	ualifier	0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	<u>%Recovery</u> 99 99 105 60/2-A 	ualifier -	0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	<u>%Recovery</u> <u>99</u> 105 60/2-A 	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 Limits	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery         Q           99         105           60/2-A	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	<u>%Recovery</u> <u>99</u> 105 60/2-A 	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 Limits	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91	70 - 130 ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 15 14 14	tal/N. 1466 RP Lim 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery         Q           99         105           60/2-A	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91 91	70 - 130 .ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	<b>PPE: To</b> Batch: 15 14 14 14 14	tal/N. 1466 RP Lim 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery         Q           99         105           60/2-A	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91 91	70 - 130 <b>.ab Control</b> <b>Prep Ty</b> <b>%Rec.</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 <b>Client Sam</b>	ype: To Batch: 15 14 14 14 14 14 14	tal/N 1466 RP Lim
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1699-1 MS Matrix: Solid	%Recovery         Q           99         105           60/2-A	ualifier -	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100	0.07845 LCSD Result 0.1000 0.08966 0.1825		mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91 91	70 - 130 	ype: To Batch: 15 14 14 14 14 14 14 14 14	tal/N 1466 RP Lim 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1699-1 MS	%Recovery         Qi           99         105           60/2-A         -           LCSD         LC           %Recovery         Qi           104         -           108         -	ualifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Uimits 70 - 130 70 - 130	0.07845 LCSD Result 0.1000 0.09082 0.08966 0.1825 0.09067	Qualifier	mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91 91	70 - 130 ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 170 Prep Ty Prep Ty Prep Ty Prep Ty	ype: To Batch: 15 14 14 14 14 14 14	tal/N. 1466 RP 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1699-1 MS Matrix: Solid Analysis Batch: 14700	%Recovery         Qi           99         105           60/2-A         -           LCSD         LC           %Recovery         Qi           %Recovery         Qi           104         108           SD         Sample         Sample	ualifier CSD ualifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000 0.0000 0.00000 0.00000 0.00000 0.000000 0.00000000	0.07845 LCSD Result 0.1000 0.08966 0.1825 0.09067	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	lient	<u>D</u>	78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91	70 - 130 -ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 190 %Rec.	ype: To Batch: 15 14 14 14 14 14 14 14 14 14 14 14	tal/N. 1466 RP 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-146 Matrix: Solid Analysis Batch: 14700 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1699-1 MS Matrix: Solid	%Recovery         Qi           99         105           60/2-A         -           LCSD         LC           %Recovery         Qi           104         -           108         -	ualifier CSD ualifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Uimits 70 - 130 70 - 130	0.07845 LCSD Result 0.1000 0.08966 0.1825 0.09067	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	lient		78 <b>ple ID: L</b> <b>%Rec</b> 100 91 90 91 91 91	70 - 130 ab Control Prep Ty Prep %Rec. Limits 70 - 130 70 - 170 Prep Ty Prep Ty Prep Ty Prep Ty	ype: To Batch: 15 14 14 14 14 14 14 14 14	tal/N. 1466 RP 3 3 3 3 3 3 3 3 3 3 5 8 8 W0 tal/N.

#### **Released to Imaging: 8/28/2024 3:46:21 PMM**

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1699-1 SDG: 31403360.006

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

Matrix: Solid Analysis Batch: 14700	0										Client Sample   Prep Type: Prep Bato	Total/N
	Sample Sa	nple	Spike	MSD	MSD						%Rec.	RP
Analyte	Result Qu	alifier	Added	Result	Qual	ifier	Unit	[	) %Re	C	Limits RF	D Lim
Ethylbenzene	0.00482		0.101	0.09246			mg/Kg					
m-Xylene & p-Xylene	0.0144		0.201	0.1911			mg/Kg					
o-Xylene	0.00334		0.101	0.09407			mg/Kg					
	MSD MS	D										
Surrogate	%Recovery Qu	alifier	Limits									
4-Bromofluorobenzene (Surr)	107		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: 890-1699-1 MS											Client Sample	D: SWO
Matrix: Solid											Prep Type:	
Analysis Batch: 14700												
	MS MS	;										
Surrogate	%Recovery Qu	alifier	Limits									
4-Bromofluorobenzene (Surr)	103		70 - 130									
1,4-Difluorobenzene (Surr)	99		70 - 130									
Analysis Batch: 14800	ME	3 MB									Prep Bato	h: 1477
Analyte	Resu	t Qualifier	RL		MDL	Unit		D	Prepare	d	Analyzed	Dil Fa
Gasoline Range Organics	<50.	Ū	50.0			mg/Kg		12	2/14/21 1	1:31	12/15/21 10:05	
(GRO)-C6-C10												
Diesel Range Organics (Over C10-C28)	<50.0	0 0	50.0			mg/Kg		12	2/14/21 1			
Oll Range Organics (Over C28-C36)	<50.0									1.31	12/15/21 10:05	
	-00.1	, 0	50.0			mg/Kg		1:	2/14/21 1		12/15/21 10:05 12/15/21 10:05	
		в <i>МВ</i>	50.0			mg/Kg		12	2/14/21 1			
-	MI %Recover	3 MB / Qualifier	Limits			mg/Kg			Prepare	1:31 ed	12/15/21 10:05 Analyzed	Dil Fa
-	МІ	3 MB / Qualifier				mg/Kg		1	<b>Prepare</b> 2/14/21 1	1:31 ed 1:31	12/15/21 10:05 Analyzed 12/15/21 10:05	
1-Chlorooctane	MI %Recover	3 MB / Qualifier	Limits			mg/Kg		1	Prepare	1:31 ed 1:31	12/15/21 10:05 Analyzed 12/15/21 10:05	Dil Fa
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776	MI <u>%Recover</u> 8 10	3 MB / Qualifier	Limits 70 - 130			mg/Kg		1:	<b>Prepare</b> 2/14/21 1 2/14/21 1	1:31 ed 1:31 1:31	12/15/21 10:05 Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro	Dil Fa
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776	MI <u>%Recover</u> 8 10	3 MB / Qualifier	Limits 70 - 130			mg/Kg		1:	<b>Prepare</b> 2/14/21 1 2/14/21 1	1:31 ed 1:31 1:31	12/15/21 10:05 <u>Analyzed</u> 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type:	Dil Fa I Sample Total/NJ
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776, Matrix: Solid	MI <u>%Recover</u> 8 10	3 MB / Qualifier	<u>Limits</u> 70 - 130 70 - 130			mg/Kg		1:	<b>Prepare</b> 2/14/21 1 2/14/21 1	1:31 ed 1:31 1:31	12/15/21 10:05 Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Bato	Dil Fa I Sample Total/NJ
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776, Matrix: Solid	MI <u>%Recover</u> 8 10	3 MB / Qualifier	<u>Limits</u> 70 - 130 70 - 130 <b>5pike</b>	LCS	LCS	mg/Kg		1:	<b>Prepare</b> 2/14/21 1 2/14/21 1	1:31 ed 1:31 1:31	12/15/21 10:05 - <u>Analyzed</u> 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec.	Dil Fa I Sample Total/NJ
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776 Matrix: Solid Analysis Batch: 14800 Analyte	MI <u>%Recover</u> 8 10	3 MB / Qualifier		Result			Unit	1: 1: Clie	Prepare 2/14/21 1 2/14/21 1 nt Sam	1:31 ed 1:31 1:31 1:31 eple	12/15/21 10:05 - Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec. Limits	Dil Fa I Sample Total/NJ
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776 Matrix: Solid Analysis Batch: 14800 Analyte Gasoline Range Organics	MI <u>%Recover</u> 8 10	3 MB / Qualifier	<u>Limits</u> 70 - 130 70 - 130 <b>5pike</b>					1: 1: Clie	Prepare 2/14/21 1 2/14/21 1 nt Sam	1:31 ed 1:31 1:31 1:31	12/15/21 10:05 - <u>Analyzed</u> 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec.	Dil Fa I Sampl Total/N
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776 Matrix: Solid Analysis Batch: 14800 Analyte Gasoline Range Organics (GRO)-C6-C10	MI <u>%Recover</u> 8 10	3 MB / Qualifier	Limits 70 - 130 70 - 130 50 - 130 50 - 130 Added 1000	Result 945.0	Qual		Unit mg/Kg	1: 1: Clie	Prepare           2/14/21 1           2/14/21 1           nt Sam           0           %Re           9	1:31 ed 1:31 1:31 1:31 1:31 eple	12/15/21 10:05 - Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec. Limits 70 - 130	<u>Dil Fa</u> I Sampl Total/N.
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776 Matrix: Solid Analysis Batch: 14800 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	MI <u>%Recover</u> 8 10	3 MB / Qualifier		Result	Qual		Unit	1: 1: Clie	Prepare 2/14/21 1 2/14/21 1 nt Sam	1:31 ed 1:31 1:31 1:31 1:31 eple	12/15/21 10:05 - Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec. Limits	<u>Dil Fa</u> I Sampl Total/N.
1-Chlorooctane o-Terphenyl	MI <u>%Recover</u> 8 10 /2-A 	3 MB 2 Qualifier 4	Limits 70 - 130 70 - 130 50 - 130 50 - 130 Added 1000	Result 945.0	Qual		Unit mg/Kg	1: 1: Clie	Prepare           2/14/21 1           2/14/21 1           nt Sam           0           %Re           9	1:31 ed 1:31 1:31 1:31 1:31 eple	12/15/21 10:05 - Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec. Limits 70 - 130	Dil Fa I Sample Total/NJ
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-14776 Matrix: Solid Analysis Batch: 14800 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	MI <u>%Recover</u> 8 10 12-A	3 MB 2 Qualifier 4	Limits 70 - 130 70 - 130 50 - 130 50 - 130 Added 1000	Result 945.0	Qual		Unit mg/Kg	1: 1: Clie	Prepare           2/14/21 1           2/14/21 1           nt Sam           0           %Re           9	1:31 ed 1:31 1:31 1:31 1:31 eple	12/15/21 10:05 - Analyzed 12/15/21 10:05 12/15/21 10:05 ID: Lab Contro Prep Type: Prep Batc %Rec. Limits 70 - 130	Dil Fa I Sample Total/NJ

Client: WSP USA Inc.

Project/Site: RDX 17-6

# **QC Sample Results**

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

ab Sample ID: LCSD 880-1	4776/3-A					Clier	nt Sam	ple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 14800										Batch:	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	804.8		mg/Kg		80	70 - 130	16	20
(GRO)-C6-C10						• -					
Diesel Range Organics (Over			1000	888.6		mg/Kg		89	70 - 130	16	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	102		70 _ 130								
Lab Sample ID: 880-9270-A-	1-E MS							Client	Sample ID		
Matrix: Solid										ype: To	
Analysis Batch: 14800									Prep	Batch:	14776
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U F2	997	1180		mg/Kg		116	70 - 130		
(GRO)-C6-C10	-10.0	11 54	007	750 4				75	70 400		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	997	752.4		mg/Kg		75	70 - 130		
010-020)											
		MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	73		70 - 130								
o-Terphenyl	79		70 - 130								
Lab Sample ID: 880-9270-A-						CI	iont S	omolo IC	): Matrix Sp	siko Dur	licato
Matrix: Solid						CI	ient Sa			уре: То	
Analysis Batch: 14800										Batch:	
Analysis Batch. 14000	Sample	Sample	Spike	MSD	MSD				%Rec.	Datch.	RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			999	831.4	F2	mg/Kg		81	70 - 130	35	20
(GRO)-C6-C10			000		· <b>-</b>			0.	10-100	00	20
Diesel Range Organics (Over	<49.9	U F1	999	625.3	F1	mg/Kg		63	70 _ 130	18	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1-	70 - 130								
o-Terphenyl		S1-	70 - 130								

Lab Sample ID: MB 880-14833/1-A Matrix: Solid Analysis Batch: 14982							Client S	ample ID: Metho Prep Type:	
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/17/21 08:48	1

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-14833/2-A Matrix: Solid Analysis Batch: 14982					Clien	t Sample	e ID: Lab Co Prep	ontrol S Type: S	
	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	257.3		mg/Kg		103	90 - 110		
Lab Sample ID: LCSD 880-14833/3-A				Clie	nt San	nple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid								Type: S	
Analysis Batch: 14982									
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	258.3		mg/Kg		103	90 - 110	0	20

**QC Association Summary** 

Client: WSP USA Inc. Project/Site: RDX 17-6

#### Job ID: 890-1699-1 SDG: 31403360.006

**GC VOA** 

#### Prep Batch: 14660

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1699-1	SW04	Total/NA	Solid	5035	
MB 880-14660/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-14660/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-14660/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1699-1 MSD	SW04	Total/NA	Solid	5035	
nalysis Batch: 14700					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1699-1	SW04	Total/NA	Solid	8021B	14660
MB 880-14660/5-A	Method Blank	Total/NA	Solid	8021B	14660
LCS 880-14660/1-A	Lab Control Sample	Total/NA	Solid	8021B	14660
LCSD 880-14660/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	14660
890-1699-1 MS	SW04	Total/NA	Solid	8021B	
890-1699-1 MSD	SW04	Total/NA	Solid	8021B	14660
nalysis Batch: 15211					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1699-1	SW04	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 14776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1699-1	SW04	Total/NA	Solid	8015NM Prep	
MB 880-14776/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-14776/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-14776/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9270-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9270-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 14800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1699-1	SW04	Total/NA	Solid	8015B NM	14776
MB 880-14776/1-A	Method Blank	Total/NA	Solid	8015B NM	14776
LCS 880-14776/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	14776
LCSD 880-14776/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	14776
880-9270-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	14776
880-9270-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	14776

#### Lab Sample ID **Client Sample ID** Matrix Method Prep Batch Ргер Туре 890-1699-1 SW04 Total/NA Solid 8015 NM

#### HPLC/IC

#### Leach Batch: 14833

Lab Sample ID 890-1699-1	Client Sample ID SW04	Prep Type Soluble	Matrix Solid	Method Prep Batch
MB 880-14833/1-A	Method Blank	Soluble	Solid	DI Leach
LCS 880-14833/2-A	Lab Control Sample	Soluble	Solid	DI Leach
LCSD 880-14833/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach

Eurofins Xenco, Carlsbad

Released to Imaging: 8/28/2024 3:46:921 PMM

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# **QC** Association Summary

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

#### HPLC/IC

#### Analysis Batch: 14982

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1699-1	SW04	Soluble	Solid	300.0	14833
MB 880-14833/1-A	Method Blank	Soluble	Solid	300.0	14833
LCS 880-14833/2-A	Lab Control Sample	Soluble	Solid	300.0	14833
LCSD 880-14833/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	14833

Job ID: 890-1699-1

SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1699-1

# Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

# Client Sample ID: SW04 Date Collected: 12/10/21 09:45

Date Received: 12/13/21 12:31

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	14660	12/14/21 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14700	12/14/21 12:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			15211	12/20/21 15:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15045	12/17/21 09:16	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	14776	12/14/21 11:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14800	12/15/21 18:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	14833	12/15/21 11:24	CA	XEN MID
Soluble	Analysis	300.0		1			14982	12/19/21 22:26	SC	XEN MID

#### Laboratory References:

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

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Eurofins Xenco, Carlsbad
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Released to Imaging: 8/28/2024 3:46:21 PM

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Job ID: 890-1699-1
SDG: 31403360.006

#### Laboratory: Eurofins Xenco, Midland

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

Authority	Program		Identification Number	Expiration Date
exas	N	IELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, b	out the laboratory is not certin	ied by the governing authority. This list ma	ay include analytes ic
the agency does not o		Matrix	Analyte	
the agency does not o Analysis Method 8015 NM	ffer certification . Prep Method	Matrix Solid	Analyte Total TPH	

Eurofins Xenco, Carlsbad

Released to Imaging: 8/28/2024 3:46:921 PMM

# **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

# **Sample Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1699-1 SDG: 31403360.006

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-1699-1	SW04	Solid	12/10/21 09:45	12/13/21 12:31	0 - 4	4
						5
						8
						9
						12
						13

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Rotice: 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 of service. Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and scharge of \$55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be entroceful functions terms. It assigns standard to each project and scharge of \$55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be entroceful functions terms. It assigns standard to each project and scharge of \$55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to each project and for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to Eurofins Xenco. But not analyzed. These terms will be entroceful for each sample submitted to each	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		Sample Identification	IPT eals:	Project Name:	City, State ZIP: Phone:	Address:	Project Manager: Company Name:	🔅 eurofins
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of samples constitutes av to f samples and shall not applied to each project a Received i Received i			Matrix Date Sampled	Oracle     Oracle       Corrected Temperature Read     Tat       Corrected Temperature Read     The	God-	2329	AShreit	Hernandul	Environment Testing Xenco
valid purchase order h and Acharge of 55 for (Signature)	BRCRA 13PPM TCLP / SPLP		Time Sampled	Date: starts th lab, if re et Ice: et Ice:	Turn Around	6 Email:	A		sting
rom client company to ality for any losses or e each sample submittee	Texas 11 Al		Depth Grab/ # Comp C	NE	sh	City, State ZIP: Anna. by 23	Address:	Bill to: (if different) Company Name:	Houston Midland, T) EL Paso, T Hobbs, N
purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard rarge any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances (harge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced (Signature) Date/Time Relinduished by USign U2-13-31 4:00 2 WWW 6	A 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U		* BTE	Parameters (EPA 8,015 (nod) X(EPA 8,021 B) pride (EPA 3,00.0)	Pres.	1 Cortsbad		Jim Parley	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
nd subcontractors. It ass tif such losses are due to nalyzed. These terms will Reling uisho 2 2 4 6		>			AN	d NM BALLE	12 1	ie y	Istody as, TX (214) 902-0300 onio, TX (210) 509-333 onio, TX (210) 509-333 ck, TX (806) 794-1296 ck, TX (806) 794-1296 ad, NM (575) 988-3192
	Cu Fe Pb Mg Mr b Mn Mo Ni Se A			890-1699 Chain of Custody	ANALYSIS REQUEST			P	1
	4i κ Se			ustody		Deliverables: EDD AC	State of Project:	Program: UST/PS	W
Received by: (Signature)	Ag SiO <sub>2</sub> Na Sr Tl Sn Hg: 1631 / 245.1 / 7470				_		] ]	Work Order Comments	Work Order No: _
	- TI Sn U V Zn / 7470 / 7471	126113:700	Sample Comments	Cool: Cool     MeOH: N       HCL: HC     HNO 3: H       H_2S0 4: H2     NaOH: N       H3PO 4: NABIS     NaHSO 4: NABIS       Na 25 20 3: NASO 3     Zn       Zn Acetate+NaOH: Zn       NaOH+Ascorbic Acid: SAPC	Preservative Codes	ADaPT Other:		er Comments Brownfields RRC	Page
Date/Time 12.13.21.123) Revised Date 08/25/2020 Fiew 2020 2		E PI	omments		DI Water: H <sub>2</sub> O			Superfund	of

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1089 N Canal St.

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Carisbad NM 88220 Phone. 575-988-3199 Fax 575-988-3199							i					i								1			_	America
Client Information (Sub Contract Lab)	Sampler			Lab PM Kramer, Jessica	er, ا	essio	ŭ							Carr	ier T	racki	Carrier Tracking No(s)	(s)					COC No <sup>-</sup> 890-543 1	
Client Contact Shipping/Receiving	Phone:			E-Mail jessica kramer@eurofinset.com	a kra	amer	@eu	ırofir	nset.	corr				Stat	N N of	State of Origin New Mexico	0 -						Page: Page 1 of 1	
Company: Eurofins Xenco					Accreditations Required (See note): NELAP - Texas	AP -	ns Re Texa	aquire 3S	d (Se	e no	e):											<u> </u>	Job #: 890-1699-1	
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TX 79701																					<del>nggangangang na n</del>	and the start of the	viate 14	O AsNaO2 P - Na2O4S Q Na2SO3
Phone: 432-704-5440(Tel)	PO #				)	le															Frank Marrie	escenders.	MeOH Amchlor Ascorbic Acid	R - Na2S2O3 S H2SO4 T - TSP Dodecebudrate
Email	WO #:				CINC: Makaza																D 31 7	(ultherfold)	Ice Di Water	U Acetone V - MCAA
Project Name: RDX 17-6	Project # 88000203								=													73071-0031	K - EDTA L EDA	W pH 4-5 Z other (specify)
Site <sup>.</sup>	SSOW#								Calc B I		×											1. 1. A. A. O.	Other-	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample	Sample Type (C=comp, G=qrab)	Matrix (W=water S=solid, O=waste/oll, BT=Tissue, A=Air)	Field Filtered Perform MS/N	300_ORGFM_2	8015MOD_NM/8		8021B/5035FP_	8015MOD_Calc	Total_BTEX_G											Total Number	Special Ins	Special Instructions/Note
	X	X	Preservation Code:	on Code: 🌔	$\bigotimes$													bulle				X		
SW04 (890-1699-1)	12/10/21	09 45 Mountain		Solid		×	×		×	×	×										00002.00	->		
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Note Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/lests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.	laces the ownership c eing analyzed the sa signed Chain of Cus	rf method anali nples must be tody attesting to	yte & accreditat shipped back to said complica	tion compliance o the Eurofins ) ince to Eurofins	e upor Xenco s Xenc	Do LLC	subco labora	atory	t labc or oth	ner in	ies. 1 struct	his s ions v	ampli vill be	e shij prov	ided	ntis fi An	orwa y cha	inges	s to a	er ch	ain-c	tion	ustody If the laborate status should be brou	ory does not currently .ght to Eurofins Xenco LLC
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Unconturned Deliverable Requested 1.11.111 IV Other (specify)	Primary Deliverable Rank 2	hle Rank 2			<i>n</i>	Return To Client	Return To Client					Dis.		t is	osa	IВу	Disposal By Lab	ſ		ſ	Þ	rch	Archive For	Months
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Custody Seals Intact: ∆ Yes ∆ No

Custody Seal No

# Received by OCD: 7/19/2024 8:47:33 24MI

Sample Type Watrix Type Supple	Sample Matrix Sample (Yes or No) MS/MSD (Yes or No) MS/MSD (Yes or No) Sample Matrix Cale	Date     Image: Sample right of the source state sta	Chain of Custody Record
MOD_NM/8016NM_S_Prep Full TPH	NM/8016NM_S_Prep Full TPH	MOD_NM/8016NM_S_Prep Full TPH B/6036FP_Calc BTEX MOD_Calc L_BTEX_GCV Required (See note) Req	MOD_NM/8016NM_S_Prep Full TPH B/6036FP_Calc BTEX MOD_Calc L_BTEX_GCV Required (See note) Req
MOD_NM/8016NM_S_Prep Full TPH B/6036FP_Calc BTEX MOD_Calc MOD_Calc	NM/8016NM_S_Prep Full TPH  S6FP_Calc BTEX  Calc  Calc  X_GCV  Signature  Calc  Calc	B016MOD_NM/8016NM_S_Prep Full TPH       B021B/6036FP_Calc BTEX       B016MOD_Calc       Total_BTEX_GCV	No16MOD_NM/8016NM_S_Prep Full TPH       No21B/6036FP_Calc BTEX       N016MOD_Calc       Total_BTEX_GCV         Reg
MOD_NM/8016NM_S_Prep Full TPH B/6036FP_Calc BTEX MOD_Calc MOD_Calc	NM/8016NM_S_Prep Full TPH  S6FP_Calc BTEX  Calc  Calc  X_GCV  Signature  Calc  Calc	B015MOD_NM/8015NM_S_Prep Full TPH       B021B/5035FP_Calc BTEX       B015MOD_Calc       Total_BTEX_GCV	No16MOD_NM/8016NM_S_Prep Full TPH       No21B/6036FP_Calc BTEX       N016MOD_Calc       Total_BTEX_GCV         Reg
r of containers	r of containers		
tainers	COC No: 890-543 1 Page: Page: Page: Page 1 of 1 Job #: 890-1699-1 Preservation Cod A HCL B - Narcelte C - Nacette C - J Di Water H - Ascorbic Acid L - Di Water	CCC No: Page 1 of 1 Page 1 of 1 Page 1 of 1 Preservation Cod A HCL B - NaOH C Zh Acetate D - Nitric Acid E NaHSO4 G Amchior H Asconthic Acid J DIWater K EDTA	





14

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1699 List Number: 1

Creator: Clifton, Cloe

<6mm (1/4").

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	N/A	

SDG Number: 31403360.006

List Source: Eurofins Xenco, Carlsbad

14

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1699

Creator: Rodriguez, Leticia

List Number: 2

Job Number: 890-1699-1 SDG Number: 31403360.006

List Source: Eurofins Xenco, Midland List Creation: 12/14/21 12:00 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	Comment
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	
Received by OCD: 7/19/2024 8:47:33 2AM

# 481 2 3 4 5 6 7 8 9 10 11 12 12

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1725-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

# For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 12/23/2021 3:07:24 PM

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

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# **Definitions/Glossary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1725-1 SDG: 31403360.006

Project/Site: RD	DX 17-6 SDG: 31403360.006	
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA Qualifier	Qualifier Description	5
F1	MS and/or MSD recovery 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	8
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	9
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	1
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	
	Not Calculated	
ND NEG	Not Detected at the reporting limit (or MDL or EDL if shown)	
POS	Negative / Absent 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 TEQ TNTC	Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) Too Numerous To Count	

4

5

### **Case Narrative**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1725-1 SDG: 31403360.006

#### Job ID: 890-1725-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-1725-1

#### Receipt

The samples were received on 12/15/2021 3:54 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 1.2°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

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.

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

# **Client Sample Results**

RL

0.00200

0.00200

0.00200

MDL Unit

mg/Kg

mg/Kg

mg/Kg

D

Prepared

12/17/21 15:00

12/17/21 15:00

12/17/21 15:00

Client:	WSP	USA	Inc.
Projec	t/Site:	RDX	17-6

### **Client Sample ID: SW05**

Date Collected: 12/15/21 09:40 Date Received: 12/15/21 15:54

Sample Depth: 0 - 4

Analyte

Benzene

Toluene

Ethylbenzene

Job ID: 890-1725-1 SDG: 31403360.006

# Lab Sample ID: 890-1725-1

Analyzed

12/18/21 03:36

12/18/21 03:36

12/18/21 03:36

Matrix: Solid

725-1 Solid	
	4
	5
Dil Fac 1	6
1	7
1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	

,		-							-
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/17/21 15:00	12/18/21 03:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/17/21 15:00	12/18/21 03:36	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/17/21 15:00	12/18/21 03:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				12/17/21 15:00	12/18/21 03:36	1
1,4-Difluorobenzene (Surr)	93		70 - 130				12/17/21 15:00	12/18/21 03:36	1
Method: Total BTEX - Total BTE	(Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/21/21 14:36	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/23/21 12:30	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (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		12/17/21 14:20	12/20/21 15:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/17/21 14:20	12/20/21 15:58	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/17/21 14:20	12/20/21 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				12/17/21 14:20	12/20/21 15:58	1
o-Terphenyl	100		70 - 130				12/17/21 14:20	12/20/21 15:58	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	465		4.95		mg/Kg			12/20/21 15:46	1
lient Sample ID: SW06							Lab Sar	nple ID: 890-	1725-2
ate Collected: 12/14/21 09:50								Matri	x: Solid
ate Received: 12/15/21 15:54									
ample Depth: 0 - 4									
Method: 8021B - Volatile Organio	: Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/17/21 15:00	12/18/21 03:56	1

4-Bromofluorobenzene (Surr)	122		70 - 130		12/17/21 15:00	12/18/21 03:56	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00401	U	0.00401	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
Toluene	<0.00200	U	0.00200	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
Benzene	<0.00200	U	0.00200	mg/Kg	12/17/21 15:00	12/18/21 03:56	1
						-	

Eurofins Xenco, Carlsbad

# **Client Sample Results**

Job ID: 890-1725-1 SDG: 31403360.006

# Lab Sample ID: 890-1725-2

Matrix: Solid

5

Date Collected: 12/14/21 09:50 Date Received: 12/15/21 15:54

Client Sample ID: SW06

Sample Depth: 0 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	108		70 - 130				12/17/21 15:00	12/18/21 03:56	
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/21/21 14:36	
Method: 8015 NM - Diesel Range	e Organics (DR	0) (GC)							
Analyte	- · ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			12/23/21 12:30	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		Qualifier U	<b>RL</b> 49.9 49.9	MDL	Unit mg/Kg mg/Kg	<u> </u>	Prepared 12/17/21 14:20 12/17/21 14:20	Analyzed 12/20/21 16:18 12/20/21 16:18	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U U	49.9	MDL	mg/Kg	<u> </u>	12/17/21 14:20	12/20/21 16:18	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 <49.9	Qualifier U U U	49.9	MDL	mg/Kg mg/Kg	<u> </u>	12/17/21 14:20 12/17/21 14:20	12/20/21 16:18 12/20/21 16:18	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9 <49.9 <49.9	Qualifier U U U	49.9 49.9 49.9	MDL	mg/Kg mg/Kg	<u> </u>	12/17/21 14:20 12/17/21 14:20 12/17/21 14:20	12/20/21 16:18 12/20/21 16:18 12/20/21 16:18	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9 <49.9 <49.9 <49.9 %Recovery	Qualifier U U U	49.9 49.9 49.9 <b>Limits</b>	MDL	mg/Kg mg/Kg	<u> </u>	12/17/21 14:20 12/17/21 14:20 12/17/21 14:20 <b>Prepared</b>	12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 Analyzed	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.9	Qualifier U U Qualifier	49.9 49.9 49.9 <u>Limits</u> 70 - 130	MDL	mg/Kg mg/Kg	<u>D</u>	12/17/21 14:20 12/17/21 14:20 12/17/21 14:20 <b>Prepared</b> 12/17/21 14:20	12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 <b>Analyzed</b> 12/20/21 16:18	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result           <49.9	Qualifier U U Qualifier	49.9 49.9 49.9 <u>Limits</u> 70 - 130	MDL	mg/Kg mg/Kg mg/Kg	<u>D</u>	12/17/21 14:20 12/17/21 14:20 12/17/21 14:20 <b>Prepared</b> 12/17/21 14:20	12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 12/20/21 16:18 <b>Analyzed</b> 12/20/21 16:18	

```
12/23/2021
```

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#### Job ID: 890-1725-1 SDG: 31403360.006

Prep Type: Total/NA

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-9404-A-21-E MS	Matrix Spike	110	97		
880-9404-A-21-F MSD	Matrix Spike Duplicate	106	96		6
890-1725-1	SW05	115	93		
890-1725-2	SW06	122	108		
LCS 880-15018/1-A	Lab Control Sample	108	92		
LCSD 880-15018/2-A	Lab Control Sample Dup	109	94		8
MB 880-14947/5-A	Method Blank	127	103		
MB 880-15018/5-A	Method Blank	126	105		0
Cumonoto Lonond					3
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9504-A-1-K MS	Matrix Spike	84	83
880-9504-A-1-L MSD	Matrix Spike Duplicate	86	85
890-1725-1	SW05	100	100
890-1725-2	SW06	99	98
890-1727-A-21-I MS	Matrix Spike	113	98
890-1727-A-21-J MSD	Matrix Spike Duplicate	111	97

#### Surrogate Legend

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

#### Percent Surrogate Recovery (Acceptance Limits) 1CO2 OTPH2 (70-130) (70-130) Lab Sample ID **Client Sample ID** LCS 880-15090/2-A Lab Control Sample 100 97 LCS 880-15229/2-A Lab Control Sample 107 104 LCSD 880-15090/3-A Lab Control Sample Dup 110 116 LCSD 880-15229/3-A Lab Control Sample Dup 113 118 MB 880-15090/1-A Method Blank 142 S1+ 233 S1+ MB 880-15229/1-A Method Blank 135 S1+ 131 S1+

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

<sup>1</sup>CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Project/Site: RDX 17-6

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14947	7/ <b>5-A</b>									<b>Client Sa</b>	ample ID: N	lethod	l Blank
Matrix: Solid											Prep Ty	/pe: To	otal/NA
Analysis Batch: 15044											Prep	Batch:	: 14947
	MB	MB											
Analyte	Result	Qualifier	RL		MDL	Unit		D	P	repared	Analyze	d	Dil Fac
Benzene	<0.00200	U	0.00200			mg/Kg	I		12/1	7/21 07:30	12/17/21 1	2:15	1
Toluene	<0.00200	U	0.00200			mg/Kg	I		12/1	7/21 07:30	12/17/21 1	2:15	1
Ethylbenzene	<0.00200	U	0.00200			mg/Kg	1		12/1	7/21 07:30	12/17/21 1	2:15	1
m-Xylene & p-Xylene	< 0.00400	U	0.00400			mg/Kg	1		12/1	7/21 07:30	12/17/21 1	2:15	1
o-Xylene	<0.00200	U	0.00200			mg/Kg	1		12/1	7/21 07:30	12/17/21 1	2:15	1
Xylenes, Total	<0.00400	U	0.00400			mg/Kg	1		12/1	7/21 07:30	12/17/21 1	2:15	1
	MB	MB											
Surrogate	%Recovery	Qualifier	Limits						P	repared	Analyze	ed	Dil Fac
4-Bromofluorobenzene (Surr)	127	,	70 - 130						12/1	7/21 07:30	12/17/21 1	2:15	1
1,4-Difluorobenzene (Surr)	103	3	70 - 130						12/1	7/21 07:30	12/17/21 1	2:15	1
- Lab Sample ID: MB 880-15018	B/5-A									Client Sa	ample ID: N	lethod	l Blank
Matrix: Solid											Prep Ty	/pe: To	otal/NA
Analysis Batch: 15044													: 15018
	МВ	МВ											
Analyte	Result	Qualifier	RL		MDL	Unit		D	Р	repared	Analyze	d	Dil Fac
Benzene	<0.00200	U	0.00200			mg/Kg	1	_		7/21 15:00	12/18/21 0		1
Toluene	<0.00200	U	0.00200			mg/Kg			12/1	7/21 15:00	12/18/21 0	1:24	1
Ethylbenzene	<0.00200		0.00200			mg/Kg				7/21 15:00	12/18/21 0		1
m-Xylene & p-Xylene	<0.00400		0.00400			mg/Kg				7/21 15:00	12/18/21 0		
o-Xylene	<0.00200		0.00200			mg/Kg				7/21 15:00	12/18/21 0		1
Xylenes, Total	<0.00400		0.00400			mg/Kg				7/21 15:00	12/18/21 0		1
	0.00100	C	0.00100				,				12/10/21 0		
Suma mata	MB % Reserver		l inside							ware a ward	Amelum		Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 		Limits 70 _ 130							<b>repared</b>	Analyze		DII Fac
	105		70 - 130 70 - 130							7/21 15:00	12/18/21 0		1
1,4-Difluorobenzene (Surr)	100	,	70 - 130						12/1	7/21 15.00	12/10/21 0	1.24	,
Lab Sample ID: LCS 880-1501	18/1 <b>-A</b>							С	lient	Sample	ID: Lab Co	ntrol S	Sample
Matrix: Solid											Prep Ty		
Analysis Batch: 15044													: 15018
			Spike	LCS	LCS						%Rec.		
Analyte			Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.07815			mg/Kg			78	70 - 130		
Toluene			0.100	0.07801			mg/Kg			78	70 - 130		
Ethylbenzene			0.100	0.08074			mg/Kg			81	70 - 130		
m-Xylene & p-Xylene			0.200	0.1599			mg/Kg			80	70 - 130		
o-Xylene			0.100	0.08036			mg/Kg			80	70 - 130		
		_					5 5						
Surrogate	LCS LCS %Recovery Qua	S alifier	Limits										
4-Bromofluorobenzene (Surr)	108		70 - 130										
1,4-Difluorobenzene (Surr)	92		70 - 130										
Lab Sample ID: LCSD 880-15	018/2-4						CI	ont	Sar		ab Control	Samn	
Matrix: Solid	010/2-74							σπ	Jail	ipie iD: L	Prep Ty		
Analysis Batch: 15044													: 15018
													RPD
			Spike	LCSD	LCS	D					%Rec.		
Analyte			Spike Added	LCSD Result			Unit		D	%Rec	%Rec. Limits	RPD	Limit

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Job ID: 890-1725-1

SDG: 31403360.006

Eurofins Xenco, Carlsbad

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1725-1 SDG: 31403360.006

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

Lab Sample ID: LCSD 880-15	5018/2-A					Clie	nt Sam	ple ID: I	Lab Contro	I Sample	e Dup
Matrix: Solid									Prep T	ype: Tot	tal/NA
Analysis Batch: 15044									Prep	Batch:	1 <b>50</b> 18
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.08103		mg/Kg		81	70 - 130	4	35
Ethylbenzene			0.100	0.08149		mg/Kg		81	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1570		mg/Kg		79	70 - 130	2	35
o-Xylene			0.100	0.08323		mg/Kg		83	70 - 130	4	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	109		70 - 130								
4 4 Diffusere have a constant	94		70 100								
1,4-Difluorobenzene (Surr)	94		70 - 130								
1,4-Difluorobenzene (Surr)			70 - 130					Olivert	Commite ID		0
Lab Sample ID: 880-9404-A-2			70 - 130					Client	Sample ID		
Lab Sample ID: 880-9404-A-2 Matrix: Solid			70 - 130					Client	Prep T	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid	21-E MS							Client	Prep T Prep		tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044	21-E MS Sample	•	Spike	MS	MS		_		Prep T Prep %Rec.	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte	21-E MS Sample Result	Qualifier	Spike Added	Result		Unit	D	%Rec	Prep T Prep %Rec. Limits	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene	21-E MS Sample Result <0.00201	Qualifier U	Spike Added 0.101	<b>Result</b> 0.07600		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene	21-E MS Sample Result <0.00201 <0.00201	Qualifier U U	Spike Added 0.101 0.101	<b>Result</b> 0.07600 0.07954		mg/Kg mg/Kg	D	<b>%Rec</b> 76 79	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene Ethylbenzene	21-E MS Sample Result <0.00201 <0.00201 <0.00201	Qualifier U U U	Spike Added 0.101 0.101 0.101	Result 0.07600 0.07954 0.08324		mg/Kg mg/Kg mg/Kg	D	%Rec 76 79 83	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene Ethylbenzene	21-E MS Sample Result <0.00201 <0.00201	Qualifier U U U	Spike Added 0.101 0.101	<b>Result</b> 0.07600 0.07954		mg/Kg mg/Kg	D	<b>%Rec</b> 76 79	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	21-E MS Sample Result <0.00201 <0.00201 <0.00201	Qualifier U U U U U	Spike Added 0.101 0.101 0.101	Result 0.07600 0.07954 0.08324		mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 76 79 83	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	21-E MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U U U U U U	Spike Added 0.101 0.101 0.101 0.201	Result 0.07600 0.07954 0.08324 0.1594		mg/Kg mg/Kg mg/Kg mg/Kg	D	%Rec 76 79 83 79	Prep T           Prep           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA
Lab Sample ID: 880-9404-A-2 Matrix: Solid Analysis Batch: 15044 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	21-E MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U U U U U U MS	Spike Added 0.101 0.101 0.101 0.201	Result 0.07600 0.07954 0.08324 0.1594		mg/Kg mg/Kg mg/Kg mg/Kg	D	%Rec 76 79 83 79	Prep T           Prep           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	ype: Tot	tal/NA

#### Lab Sample ID: 880-9404-A-21-F MSD Matrix: Solid Analysis Batch: 15044

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 15044									Prep	Batch:	15018
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.07352		mg/Kg		74	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.07366		mg/Kg		74	70 - 130	8	35
Ethylbenzene	<0.00201	U	0.0990	0.08113		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1543		mg/Kg		78	70 - 130	3	35
o-Xylene	<0.00201	U	0.0990	0.08041		mg/Kg		81	70 - 130	3	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		70 - 130								

70 - 130

70 - 130

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

97

96

Lab Sample ID: MB 880-15090/1-A Matrix: Solid Analysis Batch: 15096	мв	мв					Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Fotal/NA
Analyte		Qualifier		MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/17/21 14:20	12/20/21 12:12	1

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Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1725-1 SDG: 31403360.006

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

Lab Sample ID: MB 880-15090	/1 <b>-A</b>									Client Sa	ample ID:		
Matrix: Solid													otal/NA
Analysis Batch: 15096		IB MB									Prep	Batch	: 15090
Analyte		ult Qualifier	RL		MDL	Unit		D	Pr	epared	Analyz	red	Dil Fac
Diesel Range Organics (Over		$\frac{\mathbf{u}}{\mathbf{U}}$				mg/Kg				7/21 14:20	12/20/21		1
C10-C28)						5.	5						
Oll Range Organics (Over C28-C36)	<50	0.0 U	50.0			mg/K	g	1	12/17	7/21 14:20	12/20/21	12:12	1
	/	IB MB											
Surrogate	%Recove		Limits						Pr	repared	Analyz	zed	Dil Fac
1-Chlorooctane	1	42 S1+	70 - 130					;	12/1	7/21 14:20			1
o-Terphenyl	2	33 S1+	70 - 130					1	12/1	7/21 14:20	12/20/21	12:12	1
Lab Sample ID: LCS 880-1509	0/2-A							Cli	ent	Sample	ID: Lab Co	ontrol	Sample
Matrix: Solid											Prep 1	Type: T	otal/NA
Analysis Batch: 15096											Prep	Batch	: 15090
			Spike	LCS	LCS						%Rec.		
Analyte			Added	Result	Qual	lifier	Unit		<u>D</u>	%Rec	Limits		
Gasoline Range Organics			1000	883.9			mg/Kg			88	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over			1000	935.7			mg/Kg			94	70 - 130		
C10-C28)			1000	000.1			ingrig			01	10-100		
	LCS L												
Surrogate	%Recovery G	ualifier	Limits										
			70 100										
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150	100 97		70 - 130 70 - 130				Cli	ent S	Sam	ple ID: L	ab Contro	-	
1-Chlorooctane o-Terphenyl	100 97		70 - 130				Cli	ent S	Sam	ple ID: L	Prep 1 Prep	Type: T	otal/NA : 15090
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096	100 97		70 - 130 Spike	LCSD						-	Prep 1 Prep %Rec.	Type: To Batch	otal/NA : 15090 RPD
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte	100 97		70 - 130 Spike Added	Result			Unit		Sam	%Rec	Prep 1 Prep %Rec. Limits	Type: To Batch RPD	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics	100 97		70 - 130 Spike							-	Prep 1 Prep %Rec.	Type: To Batch	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte	100 97		70 - 130 Spike Added	Result			Unit			%Rec	Prep 1 Prep %Rec. Limits	Type: To Batch RPD	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10	100 97		70 - 130 Spike Added 1000	Result 924.4			Unit mg/Kg			%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch RPD 4	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	100 97		70 - 130 Spike Added 1000	Result 924.4			Unit mg/Kg			%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch RPD 4	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	100 97 190/3-A		70 - 130 Spike Added 1000	Result 924.4			Unit mg/Kg			%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch RPD 4	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	100 97 190/3-A		70 - 130 Spike Added 1000	Result 924.4			Unit mg/Kg			%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch RPD 4	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	100 97 190/3-A 		70 - 130 Spike Added 1000 1000 Limits	Result 924.4			Unit mg/Kg			%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch RPD 4	otal/NA : 15090 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21	100 97 90/3-A 		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 924.4			Unit mg/Kg			<b>%Rec</b> 92 95	Prep 1           %Rec.           Limits           70 - 130           70 - 130	Type: To Batch RPD 4 2 : Matri:	otal/NA : 15090 RPD Limit 20 20 x Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid	100 97 90/3-A 		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 924.4			Unit mg/Kg			<b>%Rec</b> 92 95	Prep 1           Prep           %Rec.           Limits           70 - 130           70 - 130           Sample ID           Prep 1	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limin 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21	100 97 90/3-A <u>LCSD L</u> %Recovery <u>G</u> 110 116	CSD Qualifier	70 - 130 Spike Added 1000 1000 Limits 70 - 130 70 - 130	<b>Result</b> 924.4 953.9	Qual		Unit mg/Kg			<b>%Rec</b> 92 95	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep 1 Prep 1	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096	100 97 90/3-A <u>LCSD L</u> %Recovery <u>G</u> 110 116 -I MS Sample S	CSD bualifier	70 - 130  Spike Added 1000 1000  Limits 70 - 130 70 - 130 70 - 130 Spike	<b>Result</b> 924.4 953.9 MS	Qual	lifier	Unit mg/Kg mg/Kg		<u>D</u> .	%Rec 92 95 95	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep 1 Prep 1 %Rec.	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte	100 97 990/3-A 	CSD bualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result           924.4           953.9           MS           Result	Qual	lifier	Unit mg/Kg mg/Kg			%Rec 92 95 Client \$	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 8 Sample ID Prep 1 Prep 2 %Rec. Limits	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics	100 97 90/3-A <u>LCSD L</u> %Recovery <u>G</u> 110 116 -I MS Sample S	CSD bualifier	70 - 130  Spike Added 1000 1000  Limits 70 - 130 70 - 130 70 - 130 Spike	<b>Result</b> 924.4 953.9 MS	Qual	lifier	Unit mg/Kg mg/Kg		<u>D</u> .	%Rec 92 95 95	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep 1 Prep 1 %Rec.	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte	100 97 990/3-A 	CSD bualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result           924.4           953.9           MS           Result	Qual MS Qual	lifier	Unit mg/Kg mg/Kg		<u>D</u> .	%Rec 92 95 Client \$	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 8 Sample ID Prep 1 Prep 2 %Rec. Limits	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limin 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10	100 97 990/3-A <u>LCSD L</u> %Recovery G 110 116 -I MS Sample S Result G <49.9 U	CSD bualifier	70 - 130           Spike           Added           1000           1000           1000           1000           1000           1000           500           500           500           400           1000           1000           500           500           500           500           500           996	Result           924.4           953.9           953.9           MS           Result           1328	Qual MS Qual	lifier	Unit mg/Kg mg/Kg Unit mg/Kg		<u>D</u> .	%Rec           92           95           Client \$           %Rec           129	Prep 1           Prep 2           %Rec.           Limits           70 - 130           70 - 130           Sample ID           Prep 1           Prep 2           %Rec.           Limits           70 - 130	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limin 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	100 97 90/3-A <u><i>LCSD L</i></u> %Recovery <u>G</u> 110 116 -I MS <u>Sample S</u> <u>Result G</u> <49.9 U <49.9 U MS M	ample tualifier F1 F1	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         996         996	Result           924.4           953.9           953.9           MS           Result           1328	Qual MS Qual	lifier	Unit mg/Kg mg/Kg Unit mg/Kg		<u>D</u> .	%Rec           92           95           Client \$           %Rec           129	Prep 1           Prep 2           %Rec.           Limits           70 - 130           70 - 130           Sample ID           Prep 1           Prep 2           %Rec.           Limits           70 - 130	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20 20 x Spike otal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-150 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1727-A-21 Matrix: Solid Analysis Batch: 15096 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	100 97 90/3-A <u><i>LCSD L</i></u> %Recovery <u>G</u> 110 116 -I MS <u>Sample S</u> <u>Result G</u> <49.9 U	ample tualifier F1 F1	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         1000         1000         1000         Spike         Added         996	Result           924.4           953.9           953.9           MS           Result           1328	Qual MS Qual	lifier	Unit mg/Kg mg/Kg Unit mg/Kg		<u>D</u> .	%Rec           92           95           Client \$           %Rec           129	Prep 1           Prep 2           %Rec.           Limits           70 - 130           70 - 130           Sample ID           Prep 1           Prep 2           %Rec.           Limits           70 - 130	Type: To Batch RPD 4 2 : Matriz Type: To	otal/NA : 15090 RPD Limit 20 20 x Spike otal/NA

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

												Matrix Sp Prep 1	Type: To	
Analysis Batch: 15096													Batch:	
	Sample	Sam	ple	Spike	MSD	MSD	)					%Rec.		RPI
Analyte	Result			Added	Result		lifier	Unit		D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9			995	1392	F1		mg/Kg		-	136	70 - 130	5	2
GRO)-C6-C10								0 0						
Diesel Range Organics (Over	<49.9	U F1		995	1328	F1		mg/Kg			133	70 - 130	1	2
C10-C28)														
	MSD	MSD	)											
Surrogate	%Recovery	Qua	lifier	Limits										
1-Chlorooctane	111			70 - 130										
p-Terphenyl	97			70 - 130										
Lab Sample ID: MB 880-15229	/ <b>1-A</b>										Client Sa	mple ID:	Method	Blan
Matrix: Solid													Type: To	
Analysis Batch: 15231												Prep	Batch:	1522
			MB											
Analyte			Qualifier	RL		MDL	Unit		D	PI	repared	Analyz		Dil Fa
Gasoline Range Organics	<	\$0.0	U	50.0			mg/Kg	9		12/2	1/21 07:55	12/21/21	09:16	
GRO)-C6-C10				50.0						10/0		40/04/04	00.40	
Diesel Range Organics (Over C10-C28)	<	\$50.0	U	50.0			mg/Kg	9		12/2	1/21 07:55	12/21/21	09:16	
OII Range Organics (Over C28-C36)	<	\$0.0	U	50.0			mg/Kg	r		12/2	1/21 07:55	12/21/21	09.16	
		00.0	0	00.0			mg/ng	9		12/2		12/21/21	00.10	
		MB	MB											
Surrogate	%Reco	very	Qualifier	Limits						PI	repared	Analyz	ed	Dil Fa
1-Chlorooctane		135	S1+	70 - 130						12/2	1/21 07:55	12/21/21	09:16	
p-Terphenyl		131	S1+	70 - 130						12/2	1/21 07:55	12/21/21	09:16	
ab Sample ID: 1 CS 990 1522	0/2 4								~		0			
Lab Sample ID: LCS 880-1522										liant			antral C	omol
Matrix: Solid	5/2-A								U	lient	Sample		ontrol S	
Matrix: Solid	512-A								L	lient	Sample	Prep 1	Type: To	tal/N/
Matrix: Solid Analysis Batch: 15231	512-A			Snika	1.05	109			U	lient	Sample	Prep 1 Prep		tal/N/
Analysis Batch: 15231	5/2-A			Spike		LCS		Unit	U		-	Prep 1 Prep %Rec.	Type: To	tal/N/
Analysis Batch: 15231				Added	Result	Qua		Unit ma/Ka		<u> </u>	%Rec	Prep 1 Prep %Rec. Limits	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics						Qua		Unit mg/Kg			-	Prep 1 Prep %Rec.	Type: To	tal/N/
Analysis Batch: 15231				Added	Result	Qua		-			%Rec	Prep 1 Prep %Rec. Limits	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10				Added	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over				Added	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCS			Added	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCS %Recovery			Added 1000 1000 <i>Limits</i>	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane	LCS %Recovery 104			Added 1000 1000 <i>Limits</i> 70 - 130	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N/
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCS %Recovery			Added 1000 1000 <i>Limits</i>	Result 884.2	Qua		mg/Kg			% <b>Rec</b>	Prep 7 Prep %Rec. Limits 70 - 130	Type: To	tal/N
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130	Result 884.2	Qua		mg/Kg mg/Kg		<u>D</u>	%Rec 88 92	Prep 7 Prep %Rec. Limits 70 - 130	Type: To Batch:	1522
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane p-Terphenyl	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130	Result 884.2	Qua		mg/Kg mg/Kg		<u>D</u>	%Rec 88 92	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130	Type: To Batch:	le Duj
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-152	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130	Result 884.2	Qua		mg/Kg mg/Kg		<u>D</u>	%Rec 88 92	Prep 1           %Rec.           Limits           70 - 130           70 - 130           70 - Prep 1	Type: To Batch:	le Du
Analysis Batch: 15231 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate A-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-152 Matrix: Solid	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130	Result 884.2	Qual	lifier	mg/Kg mg/Kg		<u>D</u>	%Rec 88 92	Prep 1           %Rec.           Limits           70 - 130           70 - 130           70 - Prep 1	Type: To Batch: Samp Samp Type: To	le Du 1522
Analysis Batch: 15231 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate A-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-152 Matrix: Solid	LCS %Recovery 104 107			Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	<b>Result</b> 884.2 919.9	Qual	D	mg/Kg mg/Kg		<u>D</u>	%Rec 88 92	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 190 Prep 1 Prep 1	Type: To Batch: Samp Samp Type: To	le Du otal/NJ 1522 J522 RP
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-152 Matrix: Solid Analysis Batch: 15231	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	Result 884.2 919.9	Qual	D	mg/Kg mg/Kg Cli		Sam	%Rec 88 92 ple ID: La	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 190 %Rec.	Samp J Samp Satch: Batch:	le Duj
Analysis Batch: 15231 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880-152 Matrix: Solid Analysis Batch: 15231 Analyte	LCS %Recovery 104 107			Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 884.2 919.9 LCSD Result	Qual	D	mg/Kg mg/Kg Cli		Sam	%Rec 88 92 ple ID: La	Prep 1 Prep % Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 -	I Samp Gl Samp Type: To Batch: 	le Dup otal/N/ 1522 btal/N/ 1522 RPI Lim

#### Job ID: 890-1725-1 SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Lab Sample ID: LCSD 880-1 Matrix: Solid	5229/3-A					Clie	nt San	nple ID:	Lab Contro Prep 1	l Sample Type: Tot	
Analysis Batch: 15231										Batch:	
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	118		70 - 130								
Lab Sample ID: 880-9504-A-	-1-K MS							Client	Sample ID	: Matrix	Spik
Matrix: Solid										Type: Tot	
Analysis Batch: 15231										Batch:	
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1046		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	812.5		mg/Kg		82	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	83		70 _ 130								
Lab Sample ID: 880-9504-A-	-1-L MSD					C	lient S	ample IC	): Matrix Sp	oike Dup	licat
Matrix: Solid									Prep 1	Type: Tot	tal/N
Analysis Batch: 15231									Prep	Batch:	1522
	Sample	Sample	Spike	MSD	MSD				%Rec.		RP
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	995	1069		mg/Kg		104	70 - 130	2	2
Diesel Range Organics (Over C10-C28)	<49.9	U	995	836.9		mg/Kg		84	70 - 130	3	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	86		70 - 130								
o-Terphenyl	85		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-150	189/1 <b>-</b> 4							Client S	Sample ID:	Method	Rlan
Matrix: Solid								Sherr c		Type: So	
									iieh	., he. or	Jun

Analysis	Batch: 15128													
Analysis	Satch. 13120	мв	мв											
Analyte			Qualifier		RL		MDL	Unit		D	Pre	epared	Analyzed	Dil Fac
Chloride		<5.00	U		5.00			mg/Kg					12/20/21 10:02	1
Lab Samp	le ID: LCS 880-15089/2-A									Clie	ent	Sample	ID: Lab Control	Sample
Matrix: So	olid												Prep Type:	Soluble
Analysis I	Batch: 15128													
				Spike		LCS	LCS						%Rec.	
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	
Chloride				250		265.7			mg/Kg			106	90 - 110	

Eurofins Xenco, Carlsbad

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1725-1 SDG: 31403360.006

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 890.4	E090/2 A					Clien	+ Com		Lob Contro	al Camal	o Dun
Lab Sample ID: LCSD 880-1 Matrix: Solid	5069/3-A					Clien	it Sali	ipie iD.	Lab Contro Prop	Type: S	
Analysis Batch: 15128									Fieh	Type. 5	oluble
Analysis Datch. 19120			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result		Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	271.6		mg/Kg		109	90 - 110	2	20
Lab Sample ID: 890-1723-A-	4-F MS							Client	Sample IE	): Matrix	Snike
Matrix: Solid										Type: S	
Analysis Batch: 15128										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	1130		250	1377	4	mg/Kg		100	90 - 110		
 Lab Sample ID: 890-1723-A-	4-F MSD					Cli	ent Sa	ample IC	): Matrix S	pike Dup	olicate
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 15128											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	1130		250	1372	4	mg/Kg		98	90 _ 110	0	20

Eurofins Xenco, Carlsbad

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1725-1 SDG: 31403360.006

# **GC VOA**

#### Prep Batch: 14947

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-14947/5-A	Method Blank	Total/NA	Solid	5035	
ep Batch: 15018					
_ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-1725-1	SW05	Total/NA	Solid	5035	
390-1725-2	SW06	Total/NA	Solid	5035	
MB 880-15018/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-15018/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-15018/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-9404-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
380-9404-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 15044

MB 880-15018/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-15018/1-A	Lab Control Sample	Total/NA	Solid	5035		8
LCSD 880-15018/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
880-9404-A-21-E MS	Matrix Spike	Total/NA	Solid	5035		9
880-9404-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 15044						10
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	11
890-1725-1	SW05	Total/NA	Solid	8021B	15018	
890-1725-2	SW06	Total/NA	Solid	8021B	15018	12
MB 880-14947/5-A	Method Blank	Total/NA	Solid	8021B	14947	
MB 880-15018/5-A	Method Blank	Total/NA	Solid	8021B	15018	12
LCS 880-15018/1-A	Lab Control Sample	Total/NA	Solid	8021B	15018	15
LCSD 880-15018/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15018	
880-9404-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	15018	14
880-9404-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15018	

#### Analysis Batch: 15276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1725-1	SW05	Total/NA	Solid	Total BTEX	
890-1725-2	SW06	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Prep Batch: 15090

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1725-1	SW05	Total/NA	Solid	8015NM Prep	
890-1725-2	SW06	Total/NA	Solid	8015NM Prep	
MB 880-15090/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15090/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15090/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1727-A-21-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1727-A-21-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 15096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1725-1	SW05	Total/NA	Solid	8015B NM	15090
890-1725-2	SW06	Total/NA	Solid	8015B NM	15090
MB 880-15090/1-A	Method Blank	Total/NA	Solid	8015B NM	15090
LCS 880-15090/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15090
LCSD 880-15090/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15090
890-1727-A-21-I MS	Matrix Spike	Total/NA	Solid	8015B NM	15090
890-1727-A-21-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15090

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

# GC Semi VOA

## Prep Batch: 15229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-15229/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15229/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15229/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9504-A-1-K MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9504-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 15231					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-15229/1-A	Method Blank	Total/NA	Solid	8015B NM	15229
LCS 880-15229/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15229
LCSD 880-15229/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15229
880-9504-A-1-K MS	Matrix Spike	Total/NA	Solid	8015B NM	15229
880-9504-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15229
Analysis Batch: 15468					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1725-1	SW05	Total/NA	Solid	8015 NM	
890-1725-2	SW06	Total/NA	Solid	8015 NM	

## HPLC/IC

#### Leach Batch: 15089

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1725-1	SW05	Soluble	Solid	DI Leach	
890-1725-2	SW06	Soluble	Solid	DI Leach	
MB 880-15089/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15089/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15089/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1723-A-4-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1723-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 15128

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1725-1	SW05	Soluble	Solid	300.0	15089
890-1725-2	SW06	Soluble	Solid	300.0	15089
MB 880-15089/1-A	Method Blank	Soluble	Solid	300.0	15089
LCS 880-15089/2-A	Lab Control Sample	Soluble	Solid	300.0	15089
LCSD 880-15089/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15089
890-1723-A-4-E MS	Matrix Spike	Soluble	Solid	300.0	15089
890-1723-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15089

Job ID: 890-1725-1

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SDG: 31403360.006

# Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

### **Client Sample ID: SW05** Date Collected: 12/15/21 09:40

Date Received: 12/15/21 15:54

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	15018	12/17/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15044	12/18/21 03:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			15276	12/21/21 14:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15468	12/23/21 12:30	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15090	12/17/21 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15096	12/20/21 15:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	15089	12/17/21 14:11	CA	XEN MID
Soluble	Analysis	300.0		1			15128	12/20/21 15:46	CH	XEN MID

#### **Client Sample ID: SW06** Date Collected: 12/14/21 09:50

Date Received: 12/15/21 15:54

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	15018	12/17/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15044	12/18/21 03:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			15276	12/21/21 14:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15468	12/23/21 12:30	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	15090	12/17/21 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15096	12/20/21 16:18	AJ	XEN MID

1

5.04 g

50 mL

15089

15128

12/17/21 14:11 CA

12/20/21 12:55 CH

#### Laboratory References:

Leach

Analysis

Soluble

Soluble

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

DI Leach

300.0

Job ID: 890-1725-1 SDG: 31403360.006

# Lab Sample ID: 890-1725-1

Matrix: Solid

#### Lab Sample ID: 890-1725-2 Matrix: Solid

XEN MID

XEN MID

	3

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1725-1 SDG: 31403360.006

# Laboratory: Eurofins Xenco, Midland Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		ogram	Identification Number	Expiration Date
exas	NELAP		T104704400-21-22	06-30-22
The falls for a set for	construction and the determinant of the	THE REPORT OF A DESCRIPTION OF	and been the analysis and the antity. The last and	u includo onclutos for ul
the agency does not of	fer certification.	-	ed by the governing authority. This list ma	ly include analytes for wi
the agency does not of Analysis Method	• •	Matrix	Analyte	
the agency does not of	fer certification.	-		

Eurofins Xenco, Carlsbad

Released to Imaging: 8/28/2024 3:46:921 PMM

# **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1725-1 SDG: 31403360.006

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

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Eurofins Xenco, Carlsbad

# **Sample Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1725-1 SDG: 31403360.006

b Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
0-1725-1	SW05	Solid	12/15/21 09:40	12/15/21 15:54	0 - 4	4
0-1725-2	SW06	Solid	12/14/21 09:50	12/15/21 15:54	0 - 4	
						5
						8
						9
						1
						12
						1:
						1

.

Revised Date: 08/25/2020 6av. 2020 2	6					0
VINE UNO 12.5.21 100	2 Unne Byer	14/15/21 425		Kime Byers	- Un	1 Mugar
Aeceived by: (Signature) Date/Time	Relinquished by: (Signature)	Date/Time	e)	Received by: (Signature)	(Signature)	Relinquished by: (Signature)
and conditions previously negotiated.	Notice: Signature of this document and relinguishment 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 nego	to Eurofins Xenco, its affiliates and rexpenses Incurred by the client if red to Eurofins Xenco, but not ana	der from client company onsibility for any losses o i for each sample submitt	es constitutes a valid purchase or les and shall not assume any resp to each project and a charge of \$?	ument and relinquishment of samp ill be liable only for the cost of samp m charge of \$85.00 will be applied	Notice: Signature of this doc of service. Eurofins Xenco w of Eurofins Xenco. A minimu
Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn 2 Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg M TCLP/SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se /	Al Sb As Ba Be B Cd CRA Sb As Ba Be Cd	DM Texas 11 <i>F</i> 3PLP 6010 : 8RCI	8RCRA 13PPM lyzed TCLP / SPLF	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s) ar
		V				
100113 7001		- × ×	Just 1 0	×36,00 12/11/2	in	SIZENS
Cast Center:		×	2-41' Same	where where	- 60	SWAS
Sample Comments		Cont TP. BTP. CUI	Depth Grab/ Comp	Date Time Sampled Sampled	fication Matrix	Sample Identification
NaOH+Ascorbic Acid: SAPC		Ex(	1.1	Corrected Temperature:		Total Containers:
n of Custody	890-1725 Chain	E	1.4	Temperature Reading:	Yes NO WA	Sample Custody Seals:
Na 25 203: NaSO 3		РА (А	-0.2	Correction Factor:	Yes No	Cooler Custody Seals:
NaHSO 4: NABIS		8	2 1004	Thermometer ID:	ct: Yes No	Samples Received Intact:
-		115	S Mo	2	New Corroyo	
HCL: HC HOO 3: HN		-	TAT starts the day received by the lab, if received by 4:30pm		Anna Byers	Sampler's Name:
<u>o</u>		)		Due Date:	Eddy County	Project Location:
None: NO DI Water: H <sub>2</sub> O		Code	Rush	SOC Moutine	31403360.000	Project Number:
T Preservative Codes	ANALYSIS REQUEST		Turn Around	Turr	9-41 XQN	Project Name:
Deliverables: EDD ADaPT Other:	10 m	030 msp.	ama. bu	Email:	6256 - EAL (136)	Phone:
Reporting: Level II Level III PST/UST TRRP LLevel IV	, NW 98275	Cartsbook	City, State ZIP:	うべきから	Michand TX	City, State ZIP:
1	Buena Vista Dr. 1	5315 Qu	Address:	Stert	33PO NA	Address:
Program: UST/PST PRP Brownfields RRC Superfund		WPX	Company Name:		25m	Company Name:
Work Order Comments	Vezy	Jim Rah	Bill to: (if different)	Hermandet	Joseph Herr	Project Manager:
www.xenco.com Page 1 of 1	, INM (2/2) 986-3199	Hobos, NM (575) 392-7550, Carisbad, NM (575) 900-5199	пороз,			
	TX (806) 794-1296	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	EL Paso		Xenco	
Work Order No:	TX (214) 902-0300 hio, TX (210) 509-3334	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Houste Midland,	<b>Environment Testing</b>		
	louy				fine	
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Job Number: 890-1725-1 SDG Number: 31403360.006

List Source: Eurofins Xenco, Carlsbad

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1725 List Number: 1 Creator: Clifton, Cloe

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 True tampered with. 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 True HTs) 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 True MS/MSDs

N/A

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1725 List Number: 2 Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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Job Number: 890-1725-1 SDG Number: 31403360.006

List Source: Eurofins Xenco, Midland List Creation: 12/17/21 01:55 PM Received by OCD: 7/19/2024 28:47:33 2AMI

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1744-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6 Revision: 1

# For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

# Attn: Joseph Hernandez

RAMER

Authorized for release by: 1/5/2022 11:07:39 AM

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

LINKS Review your project results through TOTOLACCESS Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3t46:21 PMM

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# **Definitions/Glossary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Page 205 of 481

Job ID: 890-1744-1 SDG: 31403360.006

# **Qualifiers**

		 3
GC VOA		
Qualifier	Qualifier Description	
*_	LCS and/or LCSD is outside acceptance limits, low biased.	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	5
*1	LCS/LCSD RPD exceeds control limits.	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD 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.	8
GC Semi VC	AC	0
Qualifier	Qualifier Description	Q
U	Indicates the analyte was analyzed for but not detected.	 3
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	13
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	

	-
CNF Contains No	Free Liqui

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

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

Minimum Detectable Activity (Radiochemistry) MDA

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit

ML Minimum Level (Dioxin)

Most Probable Number MPN

Method Quantitation Limit MQL

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

Negative / Absent NEG

POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive

QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin) TEQ

TNTC Too Numerous To Count

Eurofins Xenco, Carlsbad

## Job ID: 890-1744-1

### Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1744-1

#### REVISION

The report being provided is a revision of the original report sent on 12/28/2021. The report (revision 1) is being revised due to Per client email, requesting chloride re run on SW07.

Report revision history

#### Receipt

The samples were received on 12/20/2021 4:59 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 3.6°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-15326 and analytical batch 880-15375 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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-15437 and analytical batch 880-15427 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

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.

Job ID: 890-1744-1 SDG: 31403360.006

Job ID: 890-1744-1 SDG: 31403360.006

# **Client Sample ID: SW07** Date Collected: 12/16/21 09:10 Date Received: 12/20/21 16:59

Sample Depth: 1 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Lab	Sample	ID:	890-1744-1

Matrix: Solid

5

Benzene         -0.00202         0.00202         mg/kg         12/22/110.02         12/22/12 13.6           Toluene         -0.00202         0.00202         mg/kg         12/22/110.02         12/22/12 13.36           Ehylbenzene         -0.00202         0.00202         mg/kg         12/22/110.02         12/22/12 13.36           m-Xylene & p-Xylene         -0.00202         0.00202         mg/kg         12/22/110.02         12/22/12 23.36           xylenes, Total         -0.00202         0.00202         mg/kg         12/22/110.02         12/22/12 23.36           Surrogate         -Xeropate         -0.00403         0         0.00403         mg/kg         12/22/110.02         12/22/12 23.36           Surrogate         -Xeropate         -0.00403         0         0.00403         12/22/110.02         12/22/12 33.6           Addrowardsener (Surr)         93         70 - 130         12/22/21 10.02         12/22/21 33.6         12/22/21 10.02         12/22/21 33.6           Method: Total BTEX - Total BTEX Calculation         Analyte         Result Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         DII F           Total TFEX         - Total BTEX         Result Qualifier         RL         MDL         Unit	Method: 8021B - Volatile Orga Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylenzene         <0.00202         U         0.00202         mg/Kg         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 10.02         12/22/21 23.36         DII           Surrogate         5/Recovery         Qualifier         Limits         Prepared         Analyzed         DII           4-Gromofluorobenzene (Surr)         93         70.130         mg/Kg         12/22/21 0.02         12/22/21 0.02         12/22/21 23.36           Method: Total BTEX - Total BTEX Calculation         Result Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         DII         F           Method: 8015 NM - Diesel Range Organics (DRO) (GC)         Result Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         DII         F           Gasoline Range Organics (OVer         <49.9	•	<0.00202	U	0.00202		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
Maytene         <0.00403         U         0.00403         mg/Kg         1222/21         10.02         10.02         1222/21         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.02         10.	Toluene	<0.00202	U	0.00202		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
o-Xylene         <0.00202         0.00202         mg/Kg         12222/1 1002         12222/1 23:36           Xylenes, Total         <0.00403	Ethylbenzene	<0.00202	U	0.00202		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
Xylenes, Total         <0.00403         U         0.00403         mg/Kg         12/22/21 10:02         12/22/21 23:36           Surrogate         %Recovery         Qualifier         Limits         Propared         Analyzed         Dif /           4-Bromobiorobenzene (Surr)         93         70.130         Propared         Analyzed         Dif /         Dif /           Additionable conserve         Result         Qualifier         RL         MDL         Unit         D         Propared         Analyzed         Dif /         Propared         Analyzed	m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
Surrogate         %Recovery 126         Qualifier 70.130         Limits 70.130         Prepared 12/22/110.02         Analyzed 12/22/12.336         Dil / 12/22/21.336           Method: Total BTEX - Total BTEX Calculation Analyte         93         70.130         Unit         D         Prepared 12/22/21.022         Analyzed 12/22/21.022         Dil / 12/22/21.022         Analyzed 12/22/21.023.06         Dil / Dil / 12/22/21.023.06         Dil / Dil / 12/22/21.024.1         Dil / 12/22/21.024.1         Dil / Dil / 12/22/21.024.1         Dil / 12/22/21.024.1         Dil / Dil / Dil / Dil / 12/22/21.024.1         Dil / Dil	o-Xylene	<0.00202	U	0.00202		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
Histomofiluorobenzene (Surr)         126         70.130         12/22/21 10:02         12/22/21 23:36           n.4-Difluorobenzene (Surr)         93         70.130         12/22/21 10:02         12/22/21 33:6           Method: Total BTEX - Total BTEX Calculation         nalyte         Result Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Total BTEX         <0.00403	Xylenes, Total	<0.00403	U	0.00403		mg/Kg		12/22/21 10:02	12/22/21 23:36	1
1,4-Difluorobenzene (Surr)       93       70-130       12/22/21 10:02       12/22/21 23:36         Method: Total BTEX - Total BTEX Calculation Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       DII F         Total BTEX       -<0.00403	Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BTEX Calculation Analyte         Result Qualifier         RL         MDL         Unit         D         Prepared         Analyzed 12/28/21 08:41         DII F           Total BTEX         <0.00403	4-Bromofluorobenzene (Surr)	126		70 - 130				12/22/21 10:02	12/22/21 23:36	1
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         DII F           Total BTEX         <0.00403	1,4-Difluorobenzene (Surr)	93		70 - 130				12/22/21 10:02	12/22/21 23:36	1
Total BTEX         <         <	Method: Total BTEX - Total B	<b>FEX Calcula</b>	tion							
Method: 8015 NM - Diesel Range Organics (DRO) (GC) Analyte         Result Qualifier         RL         MDL         Unit mg/Kg         D         Prepared         Analyzed         DII F           Total TPH         <49.9	Analyte			RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte         Result         Qualifier         RL         MDL         Unit         p         Prepared         Analyzed         Dil F           Total TPH         <49.9	Fotal BTEX	<0.00403	U	0.00403		mg/Kg			12/28/21 08:41	1
Total TPH         <49.9         mg/Kg         12/28/21 17.22           Method:         8015B NM - Diesel Range Organics (DRO) (GC)         MDL         Unit         D         Prepared         Analyzed         DI I           Gasoline Range Organics (GVer (GRO)-C6-C10         <49.9	Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (G	SC)						
Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte         Result Qualifier         RL 9 U         MDL 49.9         Unit mg/Kg         D         Prepared 12/22/21 09:41         Analyzed 12/22/21 18:49         Dil F           Gasoline Range Organics (GRO)-C6-C10         <49.9 U	-		-		MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Gasoline Range Organics         <49.9	Total TPH	<49.9	U	49.9		mg/Kg			12/28/21 17:22	1
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Gasoline Range Organics (GRO)-C6-C10         (GRO)-C6-C10         (GRO)-C7-C130         (GRO)-C7-C130         (GRO)	Method: 8015B NM - Diesel R	ange Organ	ics (DRO) (	(GC)						
(GRO)-C6-C10       -49.9       49.9       mg/Kg       12/22/21       12/22/21       18:49         Diesel Range Organics (Over       -49.9       U       49.9       mg/Kg       12/22/21       19:41       12/22/21       18:49         Oil Range Organics (Over C28-C36)       -49.9       U       49.9       mg/Kg       12/22/21       19:41       12/22/21       18:49         Surrogate       %Recovery       Qualifier       Limits       70.130       12/22/21       18:49       Dil /         1-Chloroactane       99       70.130       12/22/21       09:41       12/22/21       18:49       Dil /         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil /         Chloride       513       50.4       MDL       Unit       D       Prepared       Analyzed       Dil /         Chloride       513       50.4       MDL       Unit       D       Prepared       Analyzed       Matrix: So         Silient Sample ID: SW08       Kate Collected: 12/20/21       16:59       Matrix: So       Matrix: So         ample Depth: 1 - 4       Kethod: 8021B - Volatile Organic Compounds (GC)       MDL       Mnikg       12/22/				• •	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesei Range Organics (Over       <49.9		<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 18:49	1
Oll Range Organics (Over C28-C36)       <49.9       U       49.9       mg/Kg       12/22/21 09:41       12/22/21 18:49         Surrogate       %Recovery       Qualifier       Limits       70 - 130       Prepared       Analyzed       Dil F         1-Chlorooctane       99       70 - 130       12/22/21 09:41       12/22/21 08:41       12/22/21 18:49       Dil F         Method: 300.0 - Anions, Ion Chromatography - Soluble       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       50.4       50.4       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       513       00.0200       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       00.0116       State       Lab Sample ID: 890-1744       Matrix: Sol         State Received: 12/20/21 16:59       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Benzene       <	Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 18:49	1
T-Chlorooctane       99       70.130       12/22/21 09:41       12/22/21 09:41       12/22/21 18:49         o-Terphenyl       96       70.130       12/22/21 09:41       12/22/21 18:49         Method: 300.0 - Anions, Ion Chromatography - Soluble       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       50.4       mg/Kg       D       Prepared       Analyzed       Dil F         Chloride       12/20/21 16:59       ate Collected:       12/16/21 09:15       Matrix: Sol         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Analyte       0.00200       U       0.00200       mg/Kg       12/22/21 10:02       12/22/21 23:57       Dil F         Chloride       <0.00200	,	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 18:49	1
96       70 - 130       12/22/21 09:41       12/22/21 18:49         Method: 300.0 - Anions, Ion Chromatography - Soluble       Malyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       50.4       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       50.4       MDL       Unit       D       Prepared       Analyzed       Dil F         Chloride       513       50.4       MDL       Unit       D       Prepared       Analyzed       Dil F         Stilient Sample ID: SW08       Kate Collected: 12/16/21 09:15       Kate Solution       Matrix: Sol       Matrix: Sol         analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Benzene       <0.00200	Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte         Result Qualifier         RL 513         MDL 50.4         Unit mg/Kg         D         Prepared 0         Analyzed 01/03/22 17:58         Dil F           Chloride         513         50.4         mg/Kg         D         Prepared         Analyzed 01/03/22 17:58         Dil F           Chloride         513         50.4         mg/Kg         D         Prepared         Analyzed 01/03/22 17:58         Dil F           Chloride         12/16/21 09:15 ate Received: 12/20/21 16:59 ample Depth: 1 - 4         Katrix: Sol         Matrix: Sol           Method: 8021B - Volatile Organic Compounds (GC) Analyte         Result         Qualifier         RL 0.00200         MDL 0.00200         Unit         D         Prepared 12/22/21 10:02         Analyzed 12/22/21 23:57         Dil F           Benzene         <0.00200	1-Chlorooctane	99		70 - 130				12/22/21 09:41	12/22/21 18:49	1
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Chloride         513         50.4         mg/Kg         D         Prepared         Analyzed         Dil F           Chloride         513         50.4         mg/Kg         D         Prepared         Analyzed         Dil F           Chloride         12/16/21 09:15         Analyzed         Lab Sample ID: 890-1744         Matrix: Sol           Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Matrix: Sol           Method:         8021B - Volatile Organic Compounds (GC)         MDL         Unit         D         Prepared         Analyzed         Dil F           Benzene         <0.00200	o-Terphenyl	96		70 - 130				12/22/21 09:41	12/22/21 18:49	1
Chloride         513         50.4         mg/Kg         01/03/22 17:58           Chloride         513         50.4         mg/Kg         01/03/22 17:58           Chloride         513         50.4         mg/Kg         01/03/22 17:58           Chloride         12/16/21 09:15         Matrix: Sol         Matrix: Sol           State Received: 12/20/21 16:59         Matrix: Sol         Matrix: Sol           State Received: 12/20/21 16:59         Result         Qualifier         RL         MDL         Unit         P         Prepared         Analyzed         Dil F           Analyte         Result         Qualifier         RL         MDL         Unit         P         Prepared         Analyzed         Dil F           Benzene         <0.00200	Method: 300.0 - Anions, Ion C	hromatogra	iphy - Solu	ble						
Client Sample ID: SW08       Lab Sample ID: 890-1744         Mate Collected: 12/16/21 09:15       Matrix: Sol         Mathod: 8021B - Volatile Organic Compounds (GC)       Malyte         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Benzene       <0.00200	Analyte		Qualifier		MDL	Unit	D	Prepared	-	Dil Fac
Matrix: Solution         Matris Matrix: Solution	Chloride	513		50.4		mg/Kg			01/03/22 17:58	10
ate Received: 12/20/21 16:59         ample Depth: 1 - 4         Method: 8021B - Volatile Organic Compounds (GC)         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Benzene       <0.00200	lient Sample ID: SW08							Lab Samp	le ID: 890-1	744-2
ample Depth: 1 - 4         Method: 8021B - Volatile Organic Compounds (GC)         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil F         Benzene       <0.00200									Matrix	c: Solid
Method:         8021B - Volatile Organic Compounds (GC)           Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Benzene         <0.00200										
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           Benzene         <0.00200										
Benzene         <0.00200         U         0.00200         mg/Kg         12/22/21 10:02         12/22/21 23:57           Toluene         <0.00200	•			RL	MDL	Unit	D	Prepared	Analvzed	Dil Fac
Toluene       <0.00200       U       0.00200       mg/Kg       12/22/21 10:02       12/22/21 23:57         Ethylbenzene       <0.00200	-							·		1
Ethylbenzene         <0.00200         U         0.00200         mg/Kg         12/22/21 10:02         12/22/21 23:57           m-Xylene & p-Xylene         <0.00399										
m-Xylene & p-Xylene -Xylene & p-Xylene -Xylene										
o-Xylene <0.00200 U 0.00200 mg/Kg 12/22/21 10:02 12/22/21 23:57	Ethylbenzene	<0.00200	U							
	m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/22/21 10:02	12/22/21 23:57	1

Xylenes, Total mg/Kg 12/22/21 10:02 12/22/21 23:57 Surrogate %Recovery Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene (Surr) 90 70 - 130 12/22/21 10:02 12/22/21 23:57

Eurofins Xenco, Carlsbad

1

Dil Fac

# **Client Sample Results**

Job ID: 890-1744-1 SDG: 31403360.006

# Lab Sample ID: 890-1744-2

Matrix: Solid

5

Date Received: 12/20/21 16:59 Sample Depth: 1 - 4

**Client Sample ID: SW08** 

Date Collected: 12/16/21 09:15

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	85		70 - 130				12/22/21 10:02	12/22/21 23:57	1
Method: Total BTEX - Tota	al BTEX Calcula	tion							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/28/21 08:41	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	SC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/28/21 17:22	1
Method: 8015B NM - Dies	el Range Organ	ics (DRO)	(GC)						
Analyte	• •	Qualifier	RI	мы	Unit	п	Prenared	Analyzed	Dil Fa

#### Analyte Result Qualifier RL MDL Unit Analyzed Dil Fac Prepared Gasoline Range Organics <50.0 U 50.0 12/22/21 09:41 12/22/21 19:09 mg/Kg 1 (GRO)-C6-C10 12/22/21 09:41 12/22/21 19:09 **Diesel Range Organics (Over** <50.0 U 50.0 mg/Kg 1 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 12/22/21 09:41 12/22/21 19:09 Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed 70 - 130 1-Chlorooctane 105 12/22/21 09:41 12/22/21 19:09 1 o-Terphenyl 12/22/21 09:41 12/22/21 19:09 98 70 - 130 1

Method: 300.0 - Anions, Ion Ch	iromatography - Solu	ble					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	395	25.0	mg/Kg			12/22/21 14:28	5

# Client Sample ID: SW09 Date Collected: 12/16/21 09:20

Date Received: 12/20/21 16:59 Sample Depth: 1 - 4

Method: 8021B - Volatile O	rganic Compo	unds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/22/21 10:02	12/23/21 00:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130				12/22/21 10:02	12/23/21 00:17	1
1,4-Difluorobenzene (Surr)	93		70 - 130				12/22/21 10:02	12/23/21 00:17	1
Method: Total BTEX - Total	BTEX Calcula	tion							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/28/21 08:41	1
_ Method: 8015 NM - Diesel I	Range Organic	s (DRO) (0	SC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/28/21 17:22	1

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Lab Sample ID: 890-1744-3

Matrix: Solid

Job ID: 890-1744-1 SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1744-3

Lab Sample ID: 890-1744-4

# Client Sample ID: SW09

Date Collected: 12/16/21 09:20 Date Received: 12/20/21 16:59

Sample Depth: 1 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 19:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 19:30	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 19:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				12/22/21 09:41	12/22/21 19:30	1
o-Terphenyl	111		70 - 130				12/22/21 09:41	12/22/21 19:30	1

### Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		5.03		mg/Kg			12/22/21 14:38	1

# Client Sample ID: SW10

#### Date Collected: 12/16/21 09:25 Date Received: 12/20/21 16:59 Sample Depth: 1 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
Toluene	<0.00200	U *1 *+ F1	0.00200		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
m-Xylene & p-Xylene	<0.00401	U *1 *- F1	0.00401		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
o-Xylene	<0.00200	U *1 *+ F1	0.00200		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
Xylenes, Total	<0.00401	U *1 *+ F1	0.00401		mg/Kg		12/23/21 12:08	12/23/21 20:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130				12/23/21 12:08	12/23/21 20:30	1
1,4-Difluorobenzene (Surr)	100		70 - 130				12/23/21 12:08	12/23/21 20:30	1
Method: Total BTEX - Total B	<b>FEX Calcula</b>	tion							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/28/21 08:41	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (G	SC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/28/21 17:22	1
Method: 8015B NM - Diesel R	ange Organ	ics (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		12/22/21 09:41	12/22/21 19:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 19:51	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/22/21 09:41	12/22/21 19:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate	%Recovery 98	Qualifier	Limits 70 - 130				Prepared 12/22/21 09:41	Analyzed 12/22/21 19:51	Dil Fac

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		Client Sa	ample I	Resul	ts					1
Client: WSP USA Inc. Project/Site: RDX 17-6								Job ID: 890- SDG: 314033		2
Client Sample ID: SW10 Date Collected: 12/16/21 09:25						l	Lab Samp	ole ID: 890-1 Matrix	744-4 c: Solid	
Date Received: 12/20/21 16:59 Sample Depth: 1 - 4										4
Method: 300.0 - Anions, Ion Chr					11.14	_	Durand	A sector set		5
Analyte Chloride	Result 401	Qualifier	<b>RL</b> 25.2	MDL	Unit mg/Kg	D	Prepared	Analyzed 12/22/21 14:48	Dil Fac 5	
										8
										9
										13

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# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Percent Surrogate Recovery (Acceptance Limits) DFBZ1 BFB1 Lab Sample ID **Client Sample ID** (70-130) (70-130) 880-9625-A-1-A MS Matrix Spike 142 S1+ 114 880-9625-A-1-B MSD Matrix Spike Duplicate 113 88 890-1744-1 SW07 126 93 890-1744-2 SW08 90 85 890-1744-3 SW09 79 93 890-1744-4 SW10 127 100 890-1744-4 MS SW10 117 97 890-1744-4 MSD SW10 141 S1+ 104 LCS 880-15326/1-A Lab Control Sample 110 96 LCS 880-15437/1-A Lab Control Sample 626 S1+ 53 S1-LCSD 880-15326/2-A Lab Control Sample Dup 122 100 LCSD 880-15437/2-A Lab Control Sample Dup 113 102 MB 880-15326/5-A Method Blank 120 96 MB 880-15437/5-A Method Blank 122 100 Surrogate Legend BFB = 4-Bromofluorobenzene (Surr) DFBZ = 1,4-Difluorobenzene (Surr)

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

			Per
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1743-A-1-D MS	Matrix Spike	92	87
890-1743-A-1-E MSD	Matrix Spike Duplicate	103	101
890-1744-1	SW07	99	96
890-1744-2	SW08	105	98
890-1744-3	SW09	114	111
890-1744-4	SW10	98	94

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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

Percent Surrogate Recovery (Acceptance Limits) 1CO2 OTPH2 (70-130) (70 - 130)Lab Sample ID **Client Sample ID** LCS 880-15317/2-A Lab Control Sample 110 115 LCSD 880-15317/3-A Lab Control Sample Dup 119 114 MB 880-15317/1-A Method Blank 120 115 Surrogate Legend

# 1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

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# Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc.

# **QC Sample Results**

Prep Type: Total/NA Prep Batch: 15326

**Client Sample ID: Method Blank** 

Project/Site: RDX 17-6

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

Lab Sample ID: MB 880-15326/5-A
Matrix: Solid
Analysis Batch: 15375

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/22/21 10:02	12/22/21 16:11	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130				12/22/21 10:02	12/22/21 16:11	1
1,4-Difluorobenzene (Surr)	96		70 - 130				12/22/21 10:02	12/22/21 16:11	1

#### Lab Sample ID: LCS 880-15326/1-A Matrix: Solid Analysis Batch: 15375

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09590		mg/Kg		96	70 - 130	
Toluene	0.100	0.09926		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.1004		mg/Kg		100	70 - 130	
m-Xylene & p-Xylene	0.200	0.1935		mg/Kg		97	70 - 130	
o-Xylene	0.100	0.09323		mg/Kg		93	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

#### Lab Sample ID: LCSD 880-15326/2-A Matrix: Solid

#### Analysis Batch: 15375

Analysis Batch: 15375							Prep E	Batch: 15326		
	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1034		mg/Kg		103	70 - 130	8	35	
Toluene	0.100	0.1048		mg/Kg		105	70 - 130	5	35	
Ethylbenzene	0.100	0.1064		mg/Kg		106	70 - 130	6	35	
m-Xylene & p-Xylene	0.200	0.2138		mg/Kg		107	70 - 130	10	35	
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130	13	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

#### Lab Sample ID: 880-9625-A-1-A MS Matrix: Solid

Matrix: Solid Analysis Batch: 15375										pe: Total/NA Batch: 15326
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1 F2	0.0998	0.06972		mg/Kg		70	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.07261		mg/Kg		72	70 - 130	

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### **Prep Type: Total/NA** Prep Batch: 15326

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Matrix Spike** 

Released to Imaging: 8/28/2024 3046921 PMM

Client: WSP USA Inc.

Project/Site: RDX 17-6

# **QC Sample Results**

.

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Job ID: 890-1744-1 SDG: 31403360.006

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

<0.00200 U

<0.00400 U

Lab Sample ID: 880-9625 Matrix: Solid	-A-1-A MS									CI	ient Sam	ple ID: N Prep Ty		
Analysis Batch: 15375												Prep B	atch:	15326
	Sample	Sam	ple	Spike	MS	MS						%Rec.		
Analyte	Result	Qua	lifier	Added	Result	Quali	fier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00200	U F1		0.0998	0.06766	F1		mg/Kg			68	70 - 130		
m-Xylene & p-Xylene	<0.00401	UF1		0.200	0.1374	F1		mg/Kg			69	70 - 130		
o-Xylene	<0.00200	U F1		0.0998	0.06888	F1		mg/Kg			69	70 - 130		
	MS	мs												
Surrogate	%Recovery	Qua	lifier	Limits										
4-Bromofluorobenzene (Surr)	142	S1+		70 - 130										
1,4-Difluorobenzene (Surr)	114			70 - 130										
Lab Sample ID: 880-9625	-A-1-B MSD							Client	Sa	imp	le ID: Ma	trix Spik	e Dup	licate
Matrix: Solid												Prep Ty		
Analysis Batch: 15375												Prep B		
	Sample	Sam	ple	Spike	MSD	MSD						%Rec.		RPD
Analyte	Result	Qua	lifier	Added	Result	Quali	fier	Unit		D	%Rec	Limits	RPD	Limi
Benzene	<0.00200	U F1	F2	0.0994	0.02127	F1 F2	2	mg/Kg		-	21	70 - 130	106	35
Toluene	<0.00200	U F1		0.0994	0.06729	F1		mg/Kg			67	70 - 130	8	35
Ethylbenzene	<0.00200	U F1		0.0994	0.06544	F1		mg/Kg			66	70 - 130	3	35
m-Xylene & p-Xylene	<0.00401	UF1		0.199	0.1259	F1		mg/Kg			63	70 - 130	9	35
o-Xylene	<0.00200	U F1		0.0994	0.05627	F1		mg/Kg			56	70 - 130	20	35
	MSD	MSE	)											
Surrogate	%Recovery	Qua	lifier	Limits										
4-Bromofluorobenzene (Surr)	113			70 - 130										
1,4-Difluorobenzene (Surr)	88			70 - 130										
Lab Sample ID: MB 880-1	5437/5-A									Clie	ent Samp			
Matrix: Solid												Prep Ty		
Analysis Batch: 15427												Prep B	atcn:	1543/
Analyte	Re	MB	MB Qualifier	R	L	MDL	Unit		D	Р	repared	Analyz	ed	Dil Fac
Benzene	<0.00		U	0.0020			mg/K	a	_		3/21 12:08			2
Toluene	<0.00			0.0020			mg/K	-			3/21 12:08	12/23/21		1
Ethylbenzene	<0.00			0.0020			mg/K	-			3/21 12:08	12/23/21		
m-Xylene & p-Xylene	<0.00			0.0040			mg/K					12/23/21		1

	МВ	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130	12/23/21 12:08	12/23/21 20:00	1
1,4-Difluorobenzene (Surr)	100		70 - 130	12/23/21 12:08	12/23/21 20:00	1

0.00200

0.00400

mg/Kg

mg/Kg

#### Lab Sample ID: LCS 880-15437/1-A Matrix: Solid Analysis Batch: 15427

o-Xylene

Xylenes, Total

Analysis Batch: 15427							Prep Batch: 154	37
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.06355	*_	mg/Kg		64	70 - 130	
Toluene	0.100	0.2411	*+	mg/Kg		241	70 - 130	
Ethylbenzene	0.100	0.1077		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.1060	*_	mg/Kg		53	70 - 130	

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Prep Type: Total/NA

12/23/21 12:08 12/23/21 20:00

12/23/21 12:08 12/23/21 20:00

**Client Sample ID: Lab Control Sample** 

1

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

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	626	S1+	70 - 130
1,4-Difluorobenzene (Surr)	53	S1-	70 - 130

# Lab Sample ID: LCSD 880-15437/2-A Matrix: Solid

Analysis Batch: 15427							Prep E	Batch: 15437				
	Spike	LCSD	LCSD				%Rec.		RPD			
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Benzene	0.100	0.08456		mg/Kg		85	70 - 130	28	35			
Toluene	0.100	0.09326	*1	mg/Kg		93	70 - 130	88	35			
Ethylbenzene	0.100	0.1004		mg/Kg		100	70 - 130	7	35			
m-Xylene & p-Xylene	0.200	0.1964	*1	mg/Kg		98	70 - 130	60	35			
o-Xylene	0.100	0.09728	*1	mg/Kg		97	70 - 130	123	35			

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

#### Lab Sample ID: 890-1744-4 MS Matrix: Solid Analysis Batch: 15427

Analysis Batch: 15427									Prep Batch: 1	
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *-	0.0998	0.07463		mg/Kg		75	70 - 130	
Toluene	<0.00200	U *1 *+ F1	0.0998	0.06904	F1	mg/Kg		69	70 - 130	
Ethylbenzene	<0.00200	U F1	0.0998	0.05768	F1	mg/Kg		58	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *1 *- F1	0.200	0.1137	F1	mg/Kg		57	70 - 130	
o-Xylene	<0.00200	U *1 *+ F1	0.0998	0.06154	F1	mg/Kg		62	70 - 130	

	MS		
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: 890-1744-4 MSD Matrix: Solid Analysis Batch: 15/27

Analysis Batch: 15427										Prep Batch: 15				
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Benzene	< 0.00200	U *-	0.0994	0.08482		mg/Kg		85	70 - 130	13	35			
Toluene	<0.00200	U *1 *+ F1	0.0994	0.08707		mg/Kg		87	70 - 130	23	35			
Ethylbenzene	<0.00200	U F1	0.0994	0.08127		mg/Kg		82	70 - 130	34	35			
m-Xylene & p-Xylene	<0.00401	U *1 *- F1	0.199	0.1553		mg/Kg		78	70 - 130	31	35			
o-Xylene	<0.00200	U *1 *+ F1	0.0994	0.07869		mg/Kg		79	70 - 130	24	35			
	MSD	MSD												
Surrogate	%Recoverv	Qualifier	l imits											

Surroyale	%Recovery	Quaimer	Linnis
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

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

Client Sample ID: SW10

**Client Sample ID: SW10** 

Prep Type: Total/NA

Prep Type: Total/NA

### Job ID: 890-1744-1 SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

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

						Unc		Prep Type:	Tot	al/NA
								Prep Bate	n: 1;	1337/
B MB					-			A		
Ult Qualifier			MDL		[		repared	Analyzed		Dil Fa
.0 U	50.0			mg/Kg		12/2	2/21 09:41	12/22/21 11:1	5	
.0 U	50.0			mg/Kg		12/2	2/21 09:41	12/22/21 11:1	5	
.0 U	50.0			mg/Kg		12/2	2/21 09:41	12/22/21 11:1	5	
B MB										
ry Qualifier	· Limits					Р	repared	Analyzed	l	Dil Fa
15	70 - 130					12/2	2/21 09:41	12/22/21 11:1	5	
20	70 - 130					12/2	2/21 09:41	12/22/21 11:1	5	
					Clier	nt Sai		Lab Contro Prep Type: Prep Bate	Tot	al/N/
	Spike	LCS	LCS					%Rec.		
	Added	Result	Qual	ifier L	Jnit	D	%Rec	Limits		
	1000	791.8		n	ng/Kg		79	70 - 130		
	1000	1008		n	ng/Kg		101	70 - 130		
cs										
ualifier	Limits									
	70 - 130									
	70 - 130									
					ent Sa	mple		Control Sar Prep Type: Prep Bato	Tot	al/N/
	Spike	LCSD						%Rec.		RP
	Added	Result	Qual		Jnit	D	%Rec		PD	Lim
	1000	869.0		n	ng/Kg		87	70 - 130	9	2
	1000	1036		n	ng/Kg		104	70 - 130	3	2
CSD										
ualifier	Limits									
	70 - 130									
	70 - 130									
						CI		ple ID: Mat Prep Type: Prep Bato	Tot	al/N
ample	Spike	MS	MS					%Rec.		
ualifier	Added	Result	Qual	ifier L	Jnit	D	%Rec	Limits		
	996	1031			ng/Kg		101	70 - 130		
	996	1014					89	70 - 130		
u		alifier Added 996	AddedResult9961031	alifier Added Result Qual	alifier Added Result Qualifier U 996 1031 qualifier U	alifier Added Result Qualifier Unit 996 1031 mg/Kg	AddedResultQualifierUnitD99610311031mg/KgD	alifierAddedResultQualifierUnitD%Rec99610311031mg/Kg101101	alifierAddedResultQualifierUnitD%RecLimits9961031mg/Kg10170 - 130	AddedResultQualifierUnitD%RecLimits9961031mg/Kg10170 - 130

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Job ID: 890-1744-1 SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Lab Sample ID: 890-1743 Matrix: Solid	-A-1-D MS								CI	ient Sa	mple ID: Prep Ty	vpe: Tot	tal/NA
Analysis Batch: 15328											Prep E	Batch:	15317
	MS	MS											
Surrogate	%Recovery	Qual	lifier	Limits									
1-Chlorooctane	92			70 - 130	-								
o-Terphenyl	87			70 - 130									
								0	•				
Lab Sample ID: 890-1743	-A-1-E MSD							Client	Samp	le ID: N	Matrix Spil		
Matrix: Solid											Prep Ty	-	
Analysis Batch: 15328	Commis	<b>2</b>	•.	Calles								Batch:	
A	Sample			Spike			MSD Qualifiar	11 14	~		%Rec.	200	RPD
Analyte	Result		ifier	Added			Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9			995		1002		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	126			995		1192		mg/Kg		107	70 - 130	16	20
	MSD	MSD	)										
Surrogate	%Recovery	Qual	lifier	Limits									
1-Chlorooctane	103			70 - 130	-								
o-Terphenyl	101			70 - 130									
Matrix: Solid Analysis Batch: 15401		мо	MD								Prep T	ype: So	Judie
Analyte	D,	MB	MB Qualifier		RL	1	MDL Unit	1	DР	ranarad	Analy		Dil Fac
Chloride		<5.00			5.00				<u>р</u> –	repared	Analy: 12/22/21		DII Fac
Chionae	-	0.00	0		5.00		ing/is	.g				10.00	I
Lab Sample ID: LCS 880- Matrix: Solid	-15278/2-A							Clie	nt Sai	mple ID	): Lab Cor Prep T		
Analysis Batch: 15401													
				Spike		-	LCS		_	<u>-</u>	%Rec.		
Analyte				Added			Qualifier	Unit	D	%Rec	Limits		
Chloride				250		253.5		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 88	0-15278/3-A						c	lient Sa	ample	ID· I al	b Control	Sampl	e Dun
Matrix: Solid							-	mont ou	inpre		Prep T		
Analysis Batch: 15401											1100 .	ype. c.	Jubic
Allalysis Daton. 10401				Spike		I CSD	LCSD				%Rec.		RPD
Analyte				Added			Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride				250		247.8		mg/Kg	— <u>-</u>	99	90 - 110	2	20
				200		271.5		mg/rvg		00	00-110	-	20
Lab Sample ID: 890-1740	J-A-3-B MS								CI	lient Sa	mple ID:	Matrix	Spike
Matrix: Solid											Prep T		
Analysis Rotaby 15401												· ·	

Analysis Batch: 15401											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	318		1260	1571		mg/Kg		100	90 - 110		

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Client: WSP USA Inc. Project/Site: RDX 17-6

## **QC Sample Results**

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1740-A-3	B-C MSD					Client S	Samp	le ID: N	Atrix Spi		
Matrix: Solid Analysis Batch: 15401									Prep I	ype: So	JUDIE
Analysis Batch: 15401	Samplo	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte		Qualifier	Added	-	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	318		1260	1567		mg/Kg		99	90 - 110		20
						5 5					
Lab Sample ID: 890-1743-A-4 Matrix: Solid	I-B MS						C	lient Sa	mple ID: Prep T	Matrix Solution	
Analysis Batch: 15401										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	6560		2500	9222		mg/Kg		107	90 - 110		
Lab Sample ID: 890-1743-A-4	I-C MSD					Client S	Samp	le ID: N	latrix Spi		
Matrix: Solid									Prep T	ype: So	oluble
Analysis Batch: 15401											
	•	Sample	Spike	_	MSD		_		%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	6560		2500	9214		mg/Kg		106	90 - 110	0	20
Lab Sample ID: MB 880-1552	01/1_Δ						Clie	ont Sam	nple ID: M	lethod I	Blank
Matrix: Solid							One	ant Jan		ype: So	
Analysis Batch: 15817									i i op i	<b>J</b> pc. <b>O</b> C	
Analysis Baten. 10017		МВ МВ									
		sult Qualifier		RL	MDL Unit	D	P	repared	Analy	zed	Dil Fac
Analyte	Re	suit Qualifier									
Analyte Chloride Lab Sample ID: LCS 880-155 Matrix: Solid	<	5.00 U		5.00	mg/K	g		mple ID	12/30/21	17:04	1 ample
Chloride	<		Spike	5.00		g		mple ID	12/30/21	17:04	1 ample
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte	<		Spike Added	5.00 LCS Result	mg/K	g Clien Unit		%Rec	12/30/21 Contractions Contraction Contract	17:04	1 ample
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817	<		Spike	5.00 LCS	LCS	g Clien	nt Sai		12/30/21 2: Lab Cor Prep T %Rec.	17:04	1 ample
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte	< 21/2-A		Spike Added	5.00 LCS Result	LCS Qualifier	Clien Unit mg/Kg	nt Sai	<b>%Rec</b>	12/30/21         12/30/21         Example         Prep T         %Rec.         Limits         90 - 110         Control	17:04 ntrol Sa ype: So Sample	1 ample bluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid	< 21/2-A		Spike Added	5.00 LCS Result	LCS Qualifier	Clien Unit mg/Kg	nt Sai	<b>%Rec</b>	12/30/21         12/30/21         Example         Prep T         %Rec.         Limits         90 - 110         Control	17:04	1 ample bluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15	< 21/2-A		Spike Added	5.00 LCS Result 250.3	LCS Qualifier	Clien Unit mg/Kg	nt Sai	<b>%Rec</b>	12/30/21         12/30/21         Example         Prep T         %Rec.         Limits         90 - 110         Control	17:04 ntrol Sa ype: So Sample	1 ample bluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid	< 21/2-A		Spike Added 250	5.00 LCS Result 250.3	LCS Qualifier	Clien Unit mg/Kg	nt Sai	<b>%Rec</b>	12/30/21         12/30/21         Prep T         %Rec.         Limits         90 - 110         Control         Prep T	17:04 ntrol Sa ype: So Sample	1 ample bluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817	< 21/2-A		Spike Added 250 Spike	5.00 LCS Result 250.3	LCS Qualifier LCSD	Clien Unit mg/Kg	nt Sar D mple	%Rec 100	2: Lab Con Prep T %Rec. Limits 90 - 110 D Control Prep T %Rec.	17:04 ntrol Sa ype: So Sample ype: So	1 ample bluble e Dup bluble RPD
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6	21/2-A 5521/3-A		Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result	LCS Qualifier LCSD	g Clien Unit mg/Kg Client Sau Unit	nt San D D D	%Rec           100           ID: Lat           %Rec           100	2: Lab Cor Prep T %Rec. Limits 90 - 110 Control Prep T %Rec. Limits 90 - 110 mple ID:	17:04 ntrol Sa ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid	21/2-A 5521/3-A		Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result	LCS Qualifier LCSD	g Clien Unit mg/Kg Client Sau Unit	nt San D D D	%Rec           100           ID: Lat           %Rec           100	2: Lab Cor Prep T %Rec. Limits 90 - 110 Control Prep T %Rec. Limits 90 - 110 mple ID:	17:04 ntrol Sa ype: Sc Sample ype: Sc RPD 0	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6	21/2-A 5521/3-A 5-B MS	5.00 U	Spike Added 250 Spike Added 250	5.00 LCS Result 250.3 LCSD Result 250.9	LCS Qualifier LCSD Qualifier	g Clien Unit mg/Kg Client Sau Unit	nt San D D D	%Rec           100           ID: Lat           %Rec           100	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           Control           Prep T           %Rec.           Limits           90 - 110           %Rec.           Limits           90 - 110           mple ID:           Prep T	17:04 ntrol Sa ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817	21/2-A 5521/3-A 6-B MS Sample	5.00 U	Spike Added 250 Spike 250 Spike	5.00 LCS Result 250.3 LCSD Result 250.9 MS	LCS Qualifier LCSD Qualifier MS	g Clien mg/Kg Client Sar	nt San D D C	%Rec 100 ID: Lak <u>%Rec</u> 100	2: Lab Con Prep T %Rec. Limits 90 - 110 0 Control Prep T %Rec. Limits 90 - 110 mple ID: Prep T %Rec.	17:04 ntrol Sa ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Analysis Batch: 15817 Analyte	21/2-A 5521/3-A 5-B MS Sample Result	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result 250.9 MS Result	LCS Qualifier LCSD Qualifier	Clien Unit mg/Kg Client Sau Unit Unit	nt San D D D	%Rec 100 ID: Lak %Rec 100 lient Sa	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           O Control           Prep T           %Rec.           Limits           90 - 110           O Control           Prep T           %Rec.           Limits           90 - 110           mple ID:           Prep T           %Rec.           Limits           90 - 110	17:04 ntrol Sa ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817	21/2-A 5521/3-A 6-B MS Sample	5.00 U	Spike Added 250 Spike 250 Spike	5.00 LCS Result 250.3 LCSD Result 250.9 MS	LCS Qualifier LCSD Qualifier MS	g Clien mg/Kg Client Sar	nt San D D C	%Rec 100 ID: Lak <u>%Rec</u> 100	2: Lab Con Prep T %Rec. Limits 90 - 110 0 Control Prep T %Rec. Limits 90 - 110 mple ID: Prep T %Rec.	17:04 ntrol Sa ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	1 ample bluble e Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Lab Sample ID: 880-9676-A-6 Matrix: Solid	21/2-A 5521/3-A 5-B MS Sample Result 39.7	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result 250.9 MS Result	LCS Qualifier LCSD Qualifier MS	g Clien Unit mg/Kg Client Sau Unit mg/Kg	nt San D D D	%Rec           100           ID: Lak           %Rec           100           lient Sa           %Rec           110	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           O Control           Prep T           %Rec.           Limits           90 - 110           MRec.           Limits           90 - 110           Mple ID:           Prep T           %Rec.           Limits           90 - 110           MRec.           Limits           90 - 110	17:04 ntrol Sa ype: Sc Sample ype: Sc RPD 0 Matrix S ype: Sc	1 ample oluble e Dup oluble RPD Limit 20 Spike oluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6	21/2-A 21/2-A 5521/3-A 5521/3-A Sample Result 39.7 5-C MSD	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result 250.9 MS Result 313.2	LCS Qualifier C LCSD Qualifier MS Qualifier	g Clien Unit mg/Kg Client Sau Unit mg/Kg	nt San D D D	%Rec           100           ID: Lak           %Rec           100           lient Sa           %Rec           110	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           Control           Prep T           %Rec.           Limits           90 - 110           mple ID:           Prep T           %Rec.           Limits           90 - 110           Mple ID:           Prep T           %Rec.           Limits           90 - 110           Matrix Spi           Prep T	17:04 ntrol Sa ype: Sc Sample ype: Sc RPD 0 Matrix S ype: Sc ke Dup	1 ample bluble e Dup bluble RPD Limit 20 Spike bluble
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6	21/2-A 21/2-A 5521/3-A 5-B MS Sample Result 39.7 5-C MSD Sample	5.00 U Sample Qualifier Sample	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result 250.9 MS Result 313.2	LCS Qualifier C LCSD Qualifier MS Qualifier	Clien Unit mg/Kg Client Sar Unit mg/Kg Unit mg/Kg Client S	nt San D D C D Samp	%Rec         100         ID: Lak         %Rec         100         lient Sa         %Rec         110         ble ID: N	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           O Control           Prep T           %Rec.           Limits           90 - 110           MRec.           Limits           90 - 110           Mple ID:           Prep T           %Rec.           Limits           90 - 110           Matrix Spi           Prep T           %Rec.	17:04 ntrol Sa ype: Sc Sample ype: Sc RPD 0 Matrix S ype: Sc ke Dup ype: Sc	1 ample bluble e Dup bluble RPD Limit 20 Spike bluble licate bluble RPD
Chloride Lab Sample ID: LCS 880-155 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: LCSD 880-15 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Analysis Batch: 15817 Analyte Chloride Lab Sample ID: 880-9676-A-6 Matrix: Solid Lab Sample ID: 880-9676-A-6 Matrix: Solid	21/2-A 21/2-A 5521/3-A 5-B MS Sample Result 39.7 5-C MSD Sample	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 250.3 LCSD Result 250.9 MS Result 313.2	LCS Qualifier C LCSD Qualifier MS Qualifier	g Clien Unit mg/Kg Client Sau Unit mg/Kg	nt San D D D	%Rec           100           ID: Lak           %Rec           100           lient Sa           %Rec           110	12/30/21           12/30/21           Prep T           %Rec.           Limits           90 - 110           Control           Prep T           %Rec.           Limits           90 - 110           mple ID:           Prep T           %Rec.           Limits           90 - 110           Mple ID:           Prep T           %Rec.           Limits           90 - 110           Matrix Spi           Prep T	17:04 ntrol Sa ype: Sc Sample ype: Sc RPD 0 Matrix S ype: Sc ke Dup	1 ample bluble e Dup bluble RPD Limit 20 Spike bluble

Client: WSP USA Inc.

## **QC Sample Results**

Job ID: 890-1744-1 SDG: 31403360.006

## Project/Site: RDX 17-6 Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1570	5/1 <b>-A</b>									С	lie	nt Sam	ple ID: M		
Matrix: Solid													Prep T	ype: So	oluble
Analysis Batch: 15917															
		MB													
Analyte			Qualifier		RL	I	MDL			D	Pr	epared	Analyz		Dil Fac
Chloride	<	5.00	U		5.00			mg/Kg	1				01/03/22	13:00	1
Lab Sample ID: LCS 880-1570	)5/2-A								Clie	ent S	an	nple ID	: Lab Cor	ntrol Sa	ample
Matrix: Solid													Prep T	ype: So	oluble
Analysis Batch: 15917															
-				Spike		LCS	LCS						%Rec.		
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride				250		246.7			mg/Kg		_	99	90 - 110		
Lab Sample ID: LCSD 880-15	705/3-4							С	lient S	amn	le	ID <sup>.</sup> I ab	Control	Sample	e Dun
Matrix: Solid										ump		D. Lui	Prep T		
Analysis Batch: 15917													i top i	,	
				Spike		LCSD	LCSI	D					%Rec.		RPD
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		246.6			mg/Kg		_	99	90 - 110	0	20
Lab Sample ID: 890-1756-A-2	-B MS										Cli	ent Sa	mple ID: I	Matrix	Spike
Matrix: Solid													Prep T		
Analysis Batch: 15917															
	Sample	Sam	ple	Spike		MS	MS						%Rec.		
Analyte	Result	Qua	lifier	Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
	<5.04	U		252		229.9			mg/Kg			91	90 - 110		
Chloride									Client	San	nnl	e ID' M	latrix Spil	D.	lieste
	-C MSD													ke Dun	licale
Lab Sample ID: 890-1756-A-2	-C MSD								Unem	Jan	ΠÞΙ	0.0.1			
Lab Sample ID: 890-1756-A-2 Matrix: Solid	-C MSD								onem	Jan	ipi	0.2.1	Prep T		
Lab Sample ID: 890-1756-A-2	-C MSD Sample	Sam	ple	Spike		MSD	MSD		Chem	Jan	ΠÞI	0 12 11			
Lab Sample ID: 890-1756-A-2 Matrix: Solid			-	Spike Added		MSD Result			Unit		D	%Rec	Prep T		oluble

Client: WSP USA Inc. Project/Site: RDX 17-6

## GC VOA

### Prep Batch: 15326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Total/NA	Solid	5035	1
890-1744-2	SW08	Total/NA	Solid	5035	
890-1744-3	SW09	Total/NA	Solid	5035	T
MB 880-15326/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15326/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15326/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9625-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-9625-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	l

### Analysis Batch: 15375

Lah Camula ID	Oliant Comula ID	Due a True e	Matrice	Mathad	Due y Detah	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1744-1	SW07	Total/NA	Solid	8021B	15326	
890-1744-2	SW08	Total/NA	Solid	8021B	15326	
890-1744-3	SW09	Total/NA	Solid	8021B	15326	
MB 880-15326/5-A	Method Blank	Total/NA	Solid	8021B	15326	
LCS 880-15326/1-A	Lab Control Sample	Total/NA	Solid	8021B	15326	
LCSD 880-15326/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15326	
880-9625-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	15326	
880-9625-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15326	

### Analysis Batch: 15427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-4	SW10	Total/NA	Solid	8021B	15437
MB 880-15437/5-A	Method Blank	Total/NA	Solid	8021B	15437
LCS 880-15437/1-A	Lab Control Sample	Total/NA	Solid	8021B	15437
LCSD 880-15437/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15437
890-1744-4 MS	SW10	Total/NA	Solid	8021B	15437
890-1744-4 MSD	SW10	Total/NA	Solid	8021B	15437

### Prep Batch: 15437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-4	SW10	Total/NA	Solid	5035	
MB 880-15437/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15437/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15437/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1744-4 MS	SW10	Total/NA	Solid	5035	
890-1744-4 MSD	SW10	Total/NA	Solid	5035	

### Analysis Batch: 15505

Lab Sample ID 890-1744-1	Client Sample ID SW07	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
890-1744-2	SW08	Total/NA	Solid	Total BTEX	
890-1744-3	SW09	Total/NA	Solid	Total BTEX	
890-1744-4	SW10	Total/NA	Solid	Total BTEX	

## GC Semi VOA

### Prep Batch: 15317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Total/NA	Solid	8015NM Prep	
890-1744-2	SW08	Total/NA	Solid	8015NM Prep	

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Client: WSP USA Inc. Project/Site: RDX 17-6

### GC Semi VOA (Continued)

### Prep Batch: 15317 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Р
890-1744-3	SW09	Total/NA	Solid	8015NM Prep	
890-1744-4	SW10	Total/NA	Solid	8015NM Prep	
MB 880-15317/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15317/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15317/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1743-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1743-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 1532	28				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Total/NA	Solid	8015B NM	15317
890-1744-2	SW08	Total/NA	Solid	8015B NM	15317
890-1744-3	SW09	Total/NA	Solid	8015B NM	15317
890-1744-4	SW10	Total/NA	Solid	8015B NM	15317
MB 880-15317/1-A	Method Blank	Total/NA	Solid	8015B NM	15317
LCS 880-15317/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15317
LCSD 880-15317/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15317
890-1743-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	15317
890-1743-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15317

### Analysis Batch: 15674

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
890-1744-1	SW07	Total/NA	Solid	8015 NM	
890-1744-2	SW08	Total/NA	Solid	8015 NM	
890-1744-3	SW09	Total/NA	Solid	8015 NM	
890-1744-4	SW10	Total/NA	Solid	8015 NM	

## HPLC/IC

### Leach Batch: 15278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Soluble	Solid	DI Leach	
890-1744-2	SW08	Soluble	Solid	DI Leach	
890-1744-3	SW09	Soluble	Solid	DI Leach	
890-1744-4	SW10	Soluble	Solid	DI Leach	
MB 880-15278/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15278/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15278/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1740-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1740-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-1743-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1743-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 15401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Soluble	Solid	300.0	15278
890-1744-2	SW08	Soluble	Solid	300.0	15278
890-1744-3	SW09	Soluble	Solid	300.0	15278
890-1744-4	SW10	Soluble	Solid	300.0	15278
MB 880-15278/1-A	Method Blank	Soluble	Solid	300.0	15278
LCS 880-15278/2-A	Lab Control Sample	Soluble	Solid	300.0	15278

Eurofins Xenco, Carlsbad

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### Job ID: 890-1744-1 SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

### HPLC/IC (Continued)

### Analysis Batch: 15401 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-15278/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15278
890-1740-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	15278
890-1740-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15278
890-1743-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	15278
890-1743-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15278
Leach Batch: 15521					

Prep Type

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Method

DI Leach

DI Leach

DI Leach

DI Leach

DI Leach

DI Leach

Lab Sample ID	Client Sample ID
890-1744-1	SW07
MB 880-15521/1-A	Method Blank
LCS 880-15521/2-A	Lab Control Sample
LCSD 880-15521/3-A	Lab Control Sample Dup
880-9676-A-6-B MS	Matrix Spike
880-9676-A-6-C MSD	Matrix Spike Duplicate

### Leach Batch: 15705

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1744-1	SW07	Soluble	Solid	DI Leach	
MB 880-15705/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15705/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15705/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1756-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1756-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 15817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Soluble	Solid	300.0	15521
MB 880-15521/1-A	Method Blank	Soluble	Solid	300.0	15521
LCS 880-15521/2-A	Lab Control Sample	Soluble	Solid	300.0	15521
LCSD 880-15521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15521
880-9676-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	15521
880-9676-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15521

### Analysis Batch: 15917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1744-1	SW07	Soluble	Solid	300.0	15705
MB 880-15705/1-A	Method Blank	Soluble	Solid	300.0	15705
LCS 880-15705/2-A	Lab Control Sample	Soluble	Solid	300.0	15705
LCSD 880-15705/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15705
890-1756-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	15705
890-1756-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15705

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Prep Batch

Job ID: 890-1744-1 SDG: 31403360.006

Initial

Amount

4.96 g

5 mL

10.03 g

5.04 g

5.04 g

4.96 g

Final

Amount

5 mL

5 mL

10 mL

50 mL

50 mL

50 mL

Batch

15326

15375

15505

15674

15317

15328

15278

15401

15521

15817

15705

15917

Number

Dil

1

1

1

1

10

10

10

Factor

Run

Client: WSP USA Inc. Project/Site: RDX 17-6

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

### Client Sample ID: SW07 Date Collected: 12/16/21 09:10 Date Received: 12/20/21 16:59

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Leach

Leach

**Client Sample ID: SW08** 

Date Collected: 12/16/21 09:15

Date Received: 12/20/21 16:59

Prep

Batch

5035

8021B

Total BTEX

8015NM Prep

8015 NM

8015B NM

DI Leach

**DI Leach** 

**DI Leach** 

300.0

300.0

300.0

Method

Job ID: 890-1744-1 SDG: 31403360.006

Lab

XEN MID

### Lab Sample ID: 890-1744-1 Matrix: Solid

Analyst

MR

Prepared

or Analyzed

12/22/21 10:02

12/22/21 23:36 MR

12/28/21 08:41 AJ

12/28/21 17:22 AJ

12/22/21 09:41 DM

12/22/21 18:49 AJ

12/21/21 15:12 CA

12/22/21 14:18 SC

12/24/21 19:56 SC

12/30/21 18:38 CH

12/29/21 08:46 CH

01/03/22 17:58 CH

10 11 12

### Lab Sample ID: 890-1744-2 Matrix: Solid

Lab Sample ID: 890-1744-3

\_\_\_\_\_

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	15326	12/22/21 10:02	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15375	12/22/21 23:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15505	12/28/21 08:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15674	12/28/21 17:22	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.00 g	10 mL	15317 15328			XEN MID XEN MID
Soluble Soluble	Leach Analysis	DI Leach 300.0		5	5 g	50 mL	15278 15401	12/21/21 15:12 12/22/21 14:28		XEN MID XEN MID

### Client Sample ID: SW09 Date Collected: 12/16/21 09:20 Date Received: 12/20/21 16:59

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	15326	12/22/21 10:02	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15375	12/23/21 00:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15505	12/28/21 08:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15674	12/28/21 17:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15317	12/22/21 09:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15328	12/22/21 19:30	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	15278	12/21/21 15:12	CA	XEN MID
Soluble	Analysis	300.0		1			15401	12/22/21 14:38	SC	XEN MID

Eurofins Xenco, Carlsbad

Released to Imaging: 8/28/2024 3t46921 PMM

Client: WSP USA Inc. Project/Site: RDX 17-6

### Client Sample ID: SW10 Date Collected: 12/16/21 09:25 Date Received: 12/20/21 16:59

Job ID: 890-1744-1 SDG: 31403360.006

## Lab Sample ID: 890-1744-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analvzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	15437	12/23/21 12:08	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15427	12/23/21 20:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15505	12/28/21 08:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15674	12/28/21 17:22	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.02 g	10 mL	15317 15328	12/22/21 09:41 12/22/21 19:51	DM AJ	XEN MID XEN MID
Soluble Soluble	Leach Analysis	DI Leach 300.0		5	4.97 g	50 mL	15278 15401	12/21/21 15:12 12/22/21 14:48		XEN MID XEN MID

### Laboratory References:

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

Eurofins Xenco, Carlsbad

**Released to Imaging: 8/28/2024 3:46:921 PMM** 

**Accreditation/Certification Summary** 

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1744-1 SDG: 31403360.006

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## Laboratory: Eurofins Xenco, Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	N	ELAP	T104704400-21-22	06-30-22
the agency does not o	offer certification.			This list may include analytes for whic
0,	•	ort, but the laboratory is r Matrix	ot certified by the governing authority. Analyte	This list may include analytes for whic
the agency does not o	offer certification.			This list may include analytes for whic

Eurofins Xenco, Carlsbad

## **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1744-1 SDG: 31403360.006

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

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

Sample Summary

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1744-1 SDG: 31403360.006

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1744-1	SW07	Solid	12/16/21 09:10	12/20/21 16:59	1 - 4
890-1744-2	SW08	Solid	12/16/21 09:15	12/20/21 16:59	1 - 4
890-1744-3	SW09	Solid	12/16/21 09:20	12/20/21 16:59	1 - 4
890-1744-4	SW10	Solid	12/16/21 09:25	12/20/21 16:59	1 - 4

	Kenco	Environment Testing Xenco		Midland, EL Paso Hobbs,	TX (432) 704-54 , TX (915) 585-3 NM (575) 392-7	140, San Antoni 1443, Lubbock, <sup>7</sup> 1550, Carlsbad, I	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:		
Project Manager:	40	Henandez	Bill	Bill to: (if different)		n Raley	h		omments	5
Company Name:	WSP USH	+ 0 00	Ad Co	Company Name: Address:	5315		Ruena Vista De	State of Project:		
City, State ZIP:	100	SAFPE X	Ŭ,	City, State ZIP:	Ca	9	NM 8827	Reporting: Level II Cevel II		Level IV
Phone:	IN	3	Email: 0	anna. by	62 3	web. com		Deliverables: EDD	ADaPT Other:	
Project Name:	ol-ti XUZ	-	Turn Around	pun			ANALYSIS REQUEST	UEST	Preservative Codes	ve Codes
Project Number:	31403360,006			Rush	Pres. Code				None: NO	DI Water: H <sub>2</sub> O
Project Location:	Eddy County		Due Date:		(	(%	_		Cool: Cool	MeOH: Me
er's Name:	Mercy Rotich		TAT starts the day received by	received by	( po				HCL: HC	HNO 3: HN
_	NEM 2019548894			udoct for	_					
SAMPLE RECEIPT	Temp Blank:	Thermometer ID	Wet Ice:	CO NO	ameto allo				NaHSO 4: NABIS	
Conlar Custody Seals	N AN	Correction Factor:			_		890-1744 Chain of Custody	in of Custody	Na 25 20 3: NaSO	m
Sample Custody Seals:	Yes No	Temperature Reading:	ing:	3.00	H de	_	-		Zn Acetate+NaOH: Zn	H: Zn
Total Containers:		Corrected Temperature:	::	3.6	3)				NaOH+Ascorbic Acid: SAPC	Acid: SAPC
Sample Identification	fication Matrix	Date Sampled	Time Sampled	Grab/ Comp	TPH Cont &	and ara			Sample Comments	omments
tom	v	-	1	1.4.1	-				Cost Center	er :
80MS	S		5-1 51	41					1961137	100
60MD	S	12-16-2011 9:20	1-1 0	1	_					
51410	S	12-16-2020 9:25	2 14	4	-	_				
		44								
Total 200.7 / 6010	0 200.8 / 6020:	BRCR	BRCRA 13PPM T	Texas 11 A	AI Sb As Ba	Be B Cd	. a	Se Ag SiO <sub>2</sub>	SiO <sub>2</sub> Na Sr TI Sn U V Zn	
: le Method (s) a signature of this docu rice. Eurofins Xenco will	Circle Method(s) and Metal(s) to be analyzed where signature of this document and relinquishment of samples const sciencics. Eurofins Xenco will be liable only for the cost of samples and concert serves. A meliamum of the samid to acht	Alyzed 1 bies constitutes a valid pui ples and shall not assume to each project and a ch	CLP / SPLF rchase order fiv any responsibl	TCLP / SPLP 6010 : BRCKA unchase order from client company to Eu- ure any responsibility for any losses or exp- harce of \$5 for each samble submitted to	KA 5D AS B3 B2 to Eurofins Xenco, its affilia r expenses incurred by the ted to Eurofins Xenco, but r	ba be Ca Cr , its affiliates and sub ed by the client if suc moo, but not analyze	Circle Method(s) and Metal(s) to be analyzed TCLP/SPLP6010: BKCKA 35 As B& CG CF C0 CU PD MIN MI 38 Ag 11 0 Mote: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco. Is affiliates and subcontractors. It assigns standard terms and conditions of service. Sucofins 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 of such losses are due to clicrumstances beyond the control of service. Sucofins Xenco will be liable only for the cost of samples and a charae of 55 for each sample submitted is legitivity for up to analyzed. These terms will be enforced unless previously regotated.	Ing. 1031		
Relinquished by: (Signature)	Relinquished by: (Signature) Received by: (Signature)	Received by: (Signature)	gnature)		Date/Time	Time	Relinquished by: (Signature)	ture) Received by: (Signature)		Date/Time
NEW		N. H.			nho/1	4:59	2			
R	•			n			4			
							6			

## Login Sample Receipt Checklist

Client: WSP USA Inc.

### Login Number: 1744 List Number: 1 **Creator: Clifton, Cloe**

		SDG Number: 31403360.006	
Login Number: 1744		List Source: Eurofins Xenco, Carlsbad	4
List Number: 1			5
Creator: Clifton, Cloe			
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		8
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		9
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		13
Sample containers have legible labels.	True		14
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	N/A		

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Job Number: 890-1744-1

SDG Number: 31403360.006

## Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1744 List Number: 2 Cre

<6mm (1/4").

Job Number: 890-1744-1 SDG Number: 31403360.006

List Source: Eurofins Xenco, Midland

List Number: 2 Creator: Rodriguez, Leticia		List Creation: 12/21/21 02:08 PM
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	

N/A

Containers requiring zero headspace have no headspace or bubble is

Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

## Environment Testing America

## **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-1807-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

## For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 1/14/2022 2:21:49 PM

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

LINKS **Review your project** results through Total Access Have a Question? Ask-The Expert

www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3t46:21 PMM

Visit us at:

Laboratory Job ID: 890-1807-1 SDG: 31403360.006

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2

### **Definitions/Glossary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1807-1 SDG: 31403360.006

Project/Site: RI	DX 17-6 SDG: 31403360.006	
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
	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.	8
Glossary		9
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	12
DL	Detection Limit (DoD/DOE)	13
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)	

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

4

5

### **Case Narrative**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1807-1 SDG: 31403360.006

### Job ID: 890-1807-1

### Laboratory: Eurofins Carlsbad

### Narrative

Job Narrative 890-1807-1

### Receipt

The samples were received on 1/6/2022 2:27 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 1.2°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

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 880-16432 and 880-16432 and analytical batch 880-16543 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:	WSP	USA	Inc.
Project	/Site:	RDX	17-6

### Client Sample ID: SW11

Date Collected: 01/06/22 11:15

SDG: 31403360.006

Job ID: 890-1807-1

## Lab Sample ID: 890-1807-1

Matrix: Solid

5

Date Received: 01/06/22 14:27 Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:11	
Toluene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:11	
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:11	
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/07/22 08:00	01/07/22 20:11	
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:11	
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/07/22 08:00	01/07/22 20:11	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130				01/07/22 08:00	01/07/22 20:11	
1,4-Difluorobenzene (Surr)	95		70 - 130				01/07/22 08:00	01/07/22 20:11	
Method: Total BTEX - Total BTEX	(Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/12/22 12:57	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 15:29	01/09/22 01:20	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 15:29	01/09/22 01:20	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 15:29	01/09/22 01:20	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	91		70 - 130				01/07/22 15:29	01/09/22 01:20	
o-Terphenyl	107		70 - 130				01/07/22 15:29	01/09/22 01:20	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	214		4.97		mg/Kg			01/13/22 23:15	

Date Received: 01/06/22 14:27 Sample Depth: 0 - 4

Method: 8021B - Volatile Orga	nic Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/07/22 08:00	01/07/22 20:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				01/07/22 08:00	01/07/22 20:31	1

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Released to Imaging: 8/28/2024 3:46:921 PMM

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

## **Client Sample Results**

Job ID: 890-1807-1 SDG: 31403360.006

## Client Sample ID: SW12

Date Collected: 01/06/22 11:20

Sample Depth: 0 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Lab Sample ID:	890-1807-2
	Matrix: Solid

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Date Received: 01/06/22 14:27

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	94		70 - 130				01/07/22 08:00	01/07/22 20:31	1
Method: Total BTEX - Total BTEX	Calculation								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/12/22 12:57	1
- - Mathadi 0045 NM - Disasi Dama	Ormaniaa (DD)								
Method: 8015 NM - Diesel Range				MD	11		Description	A	D!!
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (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		01/07/22 15:29	01/09/22 01:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 01:40	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130				01/07/22 15:29	01/09/22 01:40	1
o-Terphenyl	84		70 - 130				01/07/22 15:29	01/09/22 01:40	1
_ Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		4.95		mg/Kg			01/13/22 23:26	1
Client Sample ID: SW13							Lab Sar	nple ID: 890-	1807-3
Date Collected: 01/06/22 11:25									x: Solid
Date Received: 01/06/22 14:27									
Sample Depth: 0 - 4									
Method: 8021B - Volatile Organic	: Compounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 20:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				01/07/22 08:00	01/07/22 20:52	1
1,4-Difluorobenzene (Surr)	102		70 - 130				01/07/22 08:00	01/07/22 20:52	1
 Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/12/22 12:57	1
– Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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**Released to Imaging: 8/28/2024 3:46:21 PMM** 

1/14/2022

## **Client Sample Results**

Job ID: 890-1807-1
SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1807-3

Lab Sample ID: 890-1807-4

Matrix: Solid

## Project/Site: RDX 17-6 Client Sample ID: SW13

Client: WSP USA Inc.

Date Collected: 01/06/22 11:25

Date Received: 01/06/22 14:27

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:00	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130				01/07/22 15:29	01/09/22 02:00	1
o-Terphenyl	90		70 - 130				01/07/22 15:29	01/09/22 02:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	278	F1	5.00		mg/Kg			01/13/22 23:32	1

### Client Sample ID: SW14

Date Collected: 01/06/22 11:30 Date Received: 01/06/22 14:27

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 21:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				01/07/22 08:00	01/07/22 21:12	1
1,4-Difluorobenzene (Surr)	93		70 - 130				01/07/22 08:00	01/07/22 21:12	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			01/12/22 12:57	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1
- Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:20	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:20	1
C10-C28)			50.0						
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/09/22 02:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130				01/07/22 15:29	01/09/22 02:20	1

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		Clien	t Sample R	esults	;				
Client: WSP USA Inc.			-					Job ID: 890	)-1807-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: SW14							Lab Sar	nple ID: 890-	1807-4
Date Collected: 01/06/22 11:30							Lab Gai		ix: Solid
Date Received: 01/06/22 14:27								inati	
Sample Depth: 0 - 4									
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	247		4.99		mg/Kg			01/13/22 23:51	1
Client Sample ID: SW15							Lab Sar	nple ID: 890-	1807-5
Date Collected: 01/06/22 11:35									ix: Solid
Date Received: 01/06/22 14:27									
Sample Depth: 0 - 4									
Method: 8021B - Volatile Organi									
Analyte		Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Benzene	<0.00199		0.00199		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/07/22 08:00	01/07/22 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130				01/07/22 08:00	01/07/22 21:33	1
1,4-Difluorobenzene (Surr)	109		70 - 130				01/07/22 08:00	01/07/22 21:33	1
Method: Total BTEX - Total BTE		0		MD	1114		Description	Ameliana	D!!
Analyte Total BTEX		Qualifier		MDL		D	Prepared	Analyzed 01/12/22 12:57	Dil Fac
	<0.00398	0	0.00398		mg/Kg			01/12/22 12.57	Ĭ
Method: 8015 NM - Diesel Range	e Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1
Method: 8015B NM - Diesel Ran	ao Organice (D								
Analyte		Qualifier	RL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics			49.9		mg/Kg	<u> </u>	01/07/22 15:29	01/09/22 02:41	1
(GRO)-C6-C10	10.0	0	10.0		mg/rtg		0 1101122 10.20	01/00/22 02:11	
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		01/07/22 15:29	01/09/22 02:41	1
C10-C28)									
					mg/Kg		01/07/22 15:29	01/09/22 02:41	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/rtg				
Oll Range Organics (Over C28-C36) Surrogate	<49.9 <b>%Recovery</b>		49.9 <i>Limits</i>		mg/rtg		Prepared	Analyzed	Dil Fac
, , , , , , , , , , , , , , , , , , ,					mg/Ng		Prepared	Analyzed 01/09/22 02:41	Dil Fac
Surrogate	%Recovery		Limits		ing/itg				
Surrogate 1-Chlorooctane o-Terphenyl		Qualifier	Limits		ing/ing		01/07/22 15:29	01/09/22 02:41	1
Surrogate 1-Chlorooctane	%Recovery 78 95 romatography -	Qualifier	Limits	MDI	Unit	D	01/07/22 15:29	01/09/22 02:41	1

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.

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

01/07/22 08:00

01/07/22 08:00

01/07/22 08:00

01/07/22 08:00

01/07/22 08:00

01/07/22 08:00

Prepared

RL

0.00200

0.00200

0.00200

0.00400

0.00200

0.00400

Limits

Job ID: 890-1807-1 SDG: 31403360.006

## **Client Sample ID: SW16**

Sample Depth: 0 - 4

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

Client: WSP USA Inc.

Project/Site: RDX 17-6

Lab Sample ID: 890-1807-6

Analyzed

01/07/22 21:53

01/07/22 21:53

01/07/22 21:53

01/07/22 21:53

01/07/22 21:53

01/07/22 21:53

Analyzed

Matrix: Solid

c: Solid	
	4
	5
Dil Fac	6
1 1 1	7
1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14

Date Collected: 01/06/22 11:40 Date Received: 01/06/22 14:27

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00400 U

<0.00200 U

<0.00400 U

%Recovery Qualifier

	,,								
4-Bromofluorobenzene (Surr)	119		70 - 130				01/07/22 08:00	01/07/22 21:53	1
1,4-Difluorobenzene (Surr)	100		70 - 130				01/07/22 08:00	01/07/22 21:53	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			01/12/22 12:57	1
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/08/22 22:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/08/22 22:37	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 15:29	01/08/22 22:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130				01/07/22 15:29	01/08/22 22:37	1
o-Terphenyl	78		70 - 130				01/07/22 15:29	01/08/22 22:37	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	387		50.0		mg/Kg			01/14/22 00:22	10

Released to Imaging: 8/28/2024 3t46921 PMM

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)	
	BFB1	DFBZ1		
Client Sample ID	(70-130)	(70-130)		
Matrix Spike	111	100		
Matrix Spike Duplicate	104	95		
SW11	103	95		
SW12	111	94		
SW13	107	102		
SW14	109	93		
SW15	122	109		
SW16	119	100		
Lab Control Sample	108	98		
Lab Control Sample Dup	107	93		
Method Blank	120	100		
	Matrix Spike Matrix Spike Duplicate SW11 SW12 SW13 SW14 SW15 SW16 Lab Control Sample Lab Control Sample Dup	Client Sample ID(70-130)Matrix Spike111Matrix Spike Duplicate104SW11103SW12111SW13107SW14109SW15122SW16119Lab Control Sample108Lab Control Sample Dup107	Client Sample ID         (70-130)         (70-130)           Matrix Spike         111         100           Matrix Spike Duplicate         104         95           SW11         103         95           SW12         111         94           SW13         107         102           SW14         109         93           SW15         122         109           SW16         119         100           Lab Control Sample Dup         107         93	BFB1         DFBZ1           Client Sample ID         (70-130)         (70-130)           Matrix Spike         111         100           Matrix Spike Duplicate         104         95           SW11         103         95           SW12         111         94           SW13         107         102           SW14         109         93           SW15         122         109           SW16         119         100           Lab Control Sample Dup         107         93

### DFBZ = 1,4-Difluorobenzene (Surr)

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

### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9971-A-1-D MS	Matrix Spike	86	84
880-9971-A-1-E MSD	Matrix Spike Duplicate	82	84
890-1807-1	SW11	91	107
890-1807-2	SW12	73	84
890-1807-3	SW13	77	90
890-1807-4	SW14	77	89
890-1807-5	SW15	78	95
890-1807-6	SW16	74	78
LCS 880-16295/2-A	Lab Control Sample	101	107
LCSD 880-16295/3-A	Lab Control Sample Dup	112	116
MB 880-16295/1-A	Method Blank	78	90
Surrogate Legend			

### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Job ID: 890-1807-1 SDG: 31403360.006

Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc.

Project/Site: RDX 17-6

Job ID: 890-1807-1 SDG: 31403360.006

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

Lab Sample ID: MB 880-16163/5-A Matrix: Solid Analysis Batch: 16202											Client Sa		Method ype: To Batch:	tal/NA
		мв м	IB											
Analyte			ualifier	RL		MDL	Unit		D	Pr	epared	Analyz	ed	Dil Fa
Benzene		200 U		0.00200			mg/Kg				7/22 08:00	01/07/22		
Toluene	<0.00	200 U	I	0.00200			mg/Kg		(	01/07	7/22 08:00	01/07/22	11:30	
Ethylbenzene	<0.00	200 U	I 	0.00200			mg/Kg			01/07	7/22 08:00	01/07/22	11:30	
m-Xylene & p-Xylene	<0.00	400 U	I	0.00400			mg/Kg		(	01/07	7/22 08:00	01/07/22	11:30	
o-Xylene	<0.00	200 U	I	0.00200			mg/Kg		(	01/07	7/22 08:00	01/07/22	11:30	1
Xylenes, Total	<0.00	400 U	I	0.00400			mg/Kg		(	01/07	7/22 08:00	01/07/22	11:30	
		MB M	1B											
Surrogate	%Recov	very Q	Qualifier	Limits						Pr	epared	Analyz	ed	Dil Fac
4-Bromofluorobenzene (Surr)		120		70 - 130					(	01/07	7/22 08:00	01/07/22	11:30	1
1,4-Difluorobenzene (Surr)		100		70 - 130					(	01/07	7/22 08:00	01/07/22	11:30	
Lab Sample ID: LCS 880-16163/1-/	4								Cli	ent	Sample	ID: Lab Co		
Matrix: Solid Analysis Batch: 16202													ype: To Batch:	
				Spike	LCS	LCS						%Rec.		
Analyte				Added	Result	Qua	ifier	Unit		<u>D</u>	%Rec	Limits		
Benzene				0.100	0.09195			mg/Kg			92	70 - 130		
Toluene				0.100	0.09439			mg/Kg			94	70 - 130		
Ethylbenzene				0.100	0.1051			mg/Kg			105	70 _ 130		
m-Xylene & p-Xylene				0.200	0.1991			mg/Kg			100	70 - 130		
o-Xylene				0.100	0.09446			mg/Kg			94	70 - 130		
				0.100	0.03440			0 0						
	LCS		or		0.03440			0 0						
Surrogate %	Recovery		er	Limits	0.03440									
Surrogate % 4-Bromofluorobenzene (Surr)			er		0.03440									
Surrogate       %         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)	6 <b>Recovery</b> 108 98		er	Limits 70 - 130	0.03440				ent S	am	ple ID: L	ab Contro	I Samp	le Dup
Surrogate % 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2	6 <b>Recovery</b> 108 98		er	Limits 70 - 130	0.03440				ent S	Sam	ple ID: La	ab Contro Prep T	-	
Surrogate 9 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2 Matrix: Solid	6 <b>Recovery</b> 108 98		er	Limits 70 - 130	0.03440				ent S	Sam	ple ID: Li	Prep T	ype: To	tal/NA
Surrogate 9 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2 Matrix: Solid	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130	LCSD	LCS	D		ent S	Sam	ple ID: La	Prep T	-	tal/NA 16163
Surrogate 9 4-Bromofiluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2 Matrix: Solid Analysis Batch: 16202	6 <b>Recovery</b> 108 98		er	Limits 70 - 130				Cli	ent S	Sam	-	Prep T Prep	ype: To	tal/NA 16163 RPD
Surrogate 9 4-Bromofiluorobenzene (Surr) 1,4-Difiluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2 Matrix: Solid Analysis Batch: 16202 Analyte	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130 Spike Added	LCSD Result			Cli	ent S		%Rec	Prep T Prep %Rec. Limits	ype: To Batch:	tal/NA 16163 RPC Limi
Surrogate 9 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16163/2 Matrix: Solid Analysis Batch: 16202 Analyte Benzene	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130 Spike	LCSD			Cli Unit mg/Kg	ent S		-	Prep T Prep %Rec.	ype: To Batch:	tal/NA 16163 RPE Limi
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130 Spike Added 0.100	LCSD Result 0.09529			Cli Unit mg/Kg mg/Kg	ent S		%Rec 95	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: 	tal/NA 16163 RPC Limi 38 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	LCSD Result 0.09529 0.1011 0.1017			Cli Unit mg/Kg mg/Kg mg/Kg	ent S		%Rec 95 101 102	Prep T           Prep           %Rec.           Limits           70 - 130           70 - 130           70 - 130	ype: To Batch: RPD 4 7 3	tal/NA 16163 RPD Limit 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene	6 <b>Recovery</b> 108 98		er	Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100	LCSD Result 0.09529 0.1011			Cli Unit mg/Kg mg/Kg	ent S		%Rec 95 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 4 7	tal/NA 16163 RPD Limit 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Analysis Batch: 16202       Analyte	6 <b>Recovery</b> 108 98	Qualifi	er	Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		%Rec 95 101 102 97	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Provide the second seco	tal/NA 16163 RPD Limit 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Surrogate       9	6Recovery 108 98	Qualifi		Limits 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		%Rec 95 101 102 97	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Provide the second seco	tal/NA 16163 RPD Limit 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Surrogate       9	6Recovery 108 98 2-A	Qualifi		Limits 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		%Rec 95 101 102 97	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Provide the second seco	tal/NA 16163 RPD Limit 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Surrogate       9         4-Bromofluorobenzene (Surr)	6Recovery 108 98 2-A LCSD 6Recovery	Qualifi		Limits 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		%Rec 95 101 102 97	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Provide the second seco	tal/NA 16163 RPD Limit 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Analysis Batch: 16202       Analysis Batch: 16202         Analyte	6Recovery 108 98 2-A 6Recovery 107 93	Qualifi		Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 0.200 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u> -	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	ype: To Batch: RPD 4 7 3 2 6 ike Du	otal/NA 16163 RPD Limit 35 35 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Analysis Batch: 16202       16202         Analyte       Benzene         Toluene       Ethylbenzene         m-Xylene & p-Xylene       9         o-Xylene       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: 890-1805-A-1-B Matrix       10	6Recovery 108 98 2-A 6Recovery 107 93	Qualifi		Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 0.200 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u> -	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	ype: To Batch: 4 7 3 2 6	otal/NA 16163 RPD Limit 35 35 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Matrix: Solid       Analysis Batch: 16202         Analyte	6Recovery 108 98 2-A 6Recovery 107 93	Qualifi		Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 0.200 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942			Cli mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u> -	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	ype: To Batch: RPD 4 7 3 2 6 ike Du	tal/NA 16163 RPD Limit 35 35 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: LCSD 880-16163/2         Matrix: Solid         Analysis Batch: 16202         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene	6Recovery 108 98 2-A 6Recovery 107 93	Qualifi LCSD Qualifi	er	Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.100 0.200 0.100	LCSD Result 0.09529 0.1011 0.1017 0.1942 0.1003		ifier	Cli mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u> -	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	ype: To Batch: RPD 4 7 3 2 6	tal/NA 16163 RPD Limit 35 35 35 35 35
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Matrix: Solid       Analysis Batch: 16202         Analyte       Benzene         Toluene       Ethylbenzene         m-Xylene & p-Xylene       9         o-Xylene       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1         Lab Sample ID: 890-1805-A-1-B Matrix: Solid       Matrix: Solid	6Recovery 108 98 2-A 6Recovery 107 93 SD	Qualifi LCSD Qualifi Sample	er	Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130	LCSD Result 0.09529 0.1011 0.1017 0.1942 0.1003	Qual	ifier	Cli mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u> -	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 Prep T Prep T Prep	ype: To Batch: RPD 4 7 3 2 6	tal/NA 16163 RPD Limit 35 35 35 35 35 35 35 35 4 16163
Surrogate       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1         Lab Sample ID: LCSD 880-16163/2       Matrix: Solid         Matrix: Solid       Analysis Batch: 16202         Analyte       Benzene         Toluene       Ethylbenzene         m-Xylene & p-Xylene       9         o-Xylene       9         4-Bromofluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         1,4-Difluorobenzene (Surr)       1,4-Difluorobenzene (Surr)         Lab Sample ID: 890-1805-A-1-B Mit Matrix: Solid       Analysis Batch: 16202	6Recovery 108 98 2-A 6Recovery 107 93 SD Sample	Qualifi LCSD Qualifi Qualifi	er	Limits 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100 70 - 130 70 - 130	LCSD Result 0.09529 0.1011 0.1017 0.1942 0.1003	Qual	ifier	Cli mg/Kg mg/Kg mg/Kg mg/Kg		D t Sa	%Rec 95 101 102 97 100	Prep T Prep %Rec. Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 -	ype: To Batch: <u>RPD</u> 4 7 3 2 6 ike Du ype: To Batch:	tal/NA 16163 RPD Limit 35 35 35 35 35 35 35 35 35 8 25 8 25 8

Eurofins Carlsbad

Job ID: 890-1807-1 SDG: 31403360.006

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

Lab Sample ID: 890-1805-A-1- Matrix: Solid												Matrix Spi Prep Ty		-
Analysis Batch: 16202												Prep		
·····,····	Sample	Sam	ple	Spike	MSD	MSD	)					%Rec.		RP
Analyte	Result			Added	Result	Qua	lifier	Unit	I	D	%Rec	Limits	RPD	Lim
Ethylbenzene	<0.00201	U		0.100	0.1019			mg/Kg						
m-Xylene & p-Xylene	<0.00402	U		0.200	0.1981			mg/Kg						
p-Xylene	<0.00201	U		0.100	0.09328			mg/Kg						
		MSD												
Surrogate		Qual	ifier	Limits										
4-Bromofluorobenzene (Surr)	104			70 - 130										
1,4-Difluorobenzene (Surr)	95			70 - 130										
Lab Sample ID: 890-1805-A-1-/ Matrix: Solid	AMS										Client S	Sample ID: Prep Ty		
Analysis Batch: 16202														
	MS	мς												
Surrogate		Qual	ifior	Limits										
4-Bromofluorobenzene (Surr)		Gudi		70 - 130										
1,4-Difluorobenzene (Surr)	100			70 - 130 70 - 130										
,														
Matrix: Solid	/1-A											Prep Ty	pe: To	otal/N
Matrix: Solid Analysis Batch: 16324		MB				MDI	11-14					Prep Ty Prep B	pe: To Batch:	otal/N : 162
Matrix: Solid Analysis Batch: 16324 <sup>Analyte</sup>	Re	sult	Qualifier	RL		MDL	Unit		<u>D</u>	Pr	epared	Prep Ty Prep E Analyze	pe: To Batch: d	otal/N : 162
Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics	Re		Qualifier	RL 50.0		MDL	Unit mg/Kg	9		Pr		Prep Ty Prep B	pe: To Batch: d	otal/N : 162
Matrix: Solid Analysis Batch: 16324 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	Re 	sult	Qualifier U			MDL		-	0	<b>Pr</b> 1/07	epared	Prep Ty Prep E Analyze	d 2:37	otal/N : 162
Matrix: Solid Analysis Batch: 16324 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Re <	sult 50.0	Qualifier U	50.0		MDL	mg/K	9	0	<b>Pr</b> 1/07 1/07	<b>epared</b> 7/22 15:29	Prep Ty Prep I Analyze	2:37	otal/N : 1629
Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Re <	esult 50.0 50.0 50.0	Qualifier U U	50.0		MDL	mg/Kg	9	0	<b>Pr</b> 1/07 1/07	epared //22 15:29 //22 15:29	Analyze           01/08/22 22	2:37	otal/N : 1629
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	Re <: <:	esult 50.0 50.0 50.0 <i>MB</i>	Qualifier U U U MB	50.0 50.0 50.0		MDL	mg/Kg	9	0	<b>Pr</b> 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29	Prep Ty Prep E 01/08/22 22 01/08/22 22 01/08/22 22	2:37 2:37	otal/N : 1629 Dil F
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate	Re <: <:	esult 50.0 50.0 50.0 MB very	Qualifier U U	50.0 50.0 50.0		MDL	mg/Kg	9	0	<b>Pr</b> 1/07 1/07 1/07 <b>Pr</b>	epared /22 15:29 /22 15:29 /22 15:29 /22 15:29 epared	Prep Ty Prep E 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 Analyze	( <b>pe: To</b> <b>Batch:</b> 2:37 2:37 2:37 2:37	otal/N : 1629 Dil F
Matrix: Solid Analysis Batch: 16324 Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Burrogate I-Chlorooctane	Re <: <:	esult 50.0 50.0 50.0 <i>MB</i>	Qualifier U U U MB	50.0 50.0 50.0		MDL	mg/Kg	9	- 0 0 0	Pr 1/07 1/07 1/07 Pr 1/07	epared /22 15:29 /22 15:29 /22 15:29	Prep Ty Prep E 01/08/22 22 01/08/22 22 01/08/22 22	d	otal/N : 1629 Dil F
Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane	Re <: <:	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB			MDL	mg/Kg	9	- 0 0 0	Pr 1/07 1/07 1/07 Pr 1/07	epared /22 15:29 /22 15:29 /22 15:29 /22 15:29 epared /22 15:29	Prep Ty           Prep I           Analyze           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           Analyze           01/08/22 22	d	otal/N : 1629 Dil F
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB			MDL	mg/Kg	9	- 0 0 0 0	Pr 1/07 1/07 1/07 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 /22 15:29	Prep Ty Prep I 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22	d       2:37       2:37       2:37       2:37       2:37       2:37       12:37	otal/N : 1629 Dil F <i>Dil F</i>
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB			MDL	mg/Kg	9	- 0 0 0 0	Pr 1/07 1/07 1/07 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 /22 15:29	Analyze           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22	d       2:37       2:37       2:37       2:37       2:37       2:37       12:37	otal/N : 1629 Dil F <i>Dil F</i>
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130			mg/Kg mg/Kg	9	- 0 0 0 0	Pr 1/07 1/07 1/07 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 /22 15:29	Prep Ty Prep I 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22 01/08/22 22	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	otal/N : 1629 Dil F <u>Dil F</u> Samp otal/N
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB		LCS	MDL	mg/Kg mg/Kg	9	- 0 0 0 0	Pr 1/07 1/07 1/07 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 /22 15:29	Analyze           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           ID: Lab Corr           Prep Ty	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	otal/N : 1629 Dil F <u>Dil F</u> Samp otal/N
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130	Result	LCS	mg/Kg mg/Kg	Unit	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 1/07 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample %Rec	Prep Ty Prep E Analyze 01/08/22 22 01/08/22 22 Prep E	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	Dill F Dill F Dill F
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130		LCS	mg/Kg mg/Kg	3	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 /22 15:29 Sample	Analyze           01/08/22 22           01/08/22           01/08/22           01/08/22           01/08/22           01/08/22           01/08/22           01/08/22           01/08/22	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	Dill F Dill F Dill F
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics (GRO)-C6-C10	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB	50.0 50.	Result 785.8	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample Sample <u>%Rec</u> 79	Analyze           01/08/22 22           01/08/22 23           01/08/22 24           01/08/22 25           01/08/22 25           01/08/22 25           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/20 10	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	otal/N : 1629 Dil F <u>Dil F</u> Samp otal/N
Matrix: Solid Analysis Batch: 16324 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	Re  %Reco	esult 50.0 50.0 50.0 MB very 78	Qualifier U U U MB	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result	LCS	mg/Kg mg/Kg	Unit	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample %Rec	Prep Ty Prep E Analyze 01/08/22 22 01/08/22 22 01/08/22 01/08/22 01/08/22 01/08/22 01/08/22 01/08/22 01/08/22 01/08/22 01/0	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	otal/N : 1629 Dil F <u>Dil F</u> Samp otal/N
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Casoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Re  %Reco	esult 50.0 50.0 50.0 MB very 78 90	Qualifier U U MB Qualifier	50.0 50.	Result 785.8	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample Sample <u>%Rec</u> 79	Analyze           01/08/22 22           01/08/22 23           01/08/22 24           01/08/22 25           01/08/22 25           01/08/22 25           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/20 10	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	Dill F Dill F Dill F
Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Re <: 	ssult           550.0           50.0           50.0           MB           very           78           90	Qualifier U U MB Qualifier	50.0 50.	Result 785.8	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample Sample <u>%Rec</u> 79	Analyze           01/08/22 22           01/08/22 23           01/08/22 24           01/08/22 25           01/08/22 25           01/08/22 25           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/22 10           01/08/20 10	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	Dil Fa
Lab Sample ID: MB 880-16295 Matrix: Solid Analysis Batch: 16324 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-1629 Matrix: Solid Analysis Batch: 16324 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	Re <: :< :< :< :< :< :< :< : : : : : : :	ssult           550.0           50.0           50.0           MB           very           78           90	Qualifier U U MB Qualifier	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 <b>Spike</b> Added 1000	Result 785.8	LCS	mg/Kg mg/Kg	g g <u>Unit</u> mg/Kg	- 0 0 0 0 0 0 0 0 0 0 0	Pr 1/07 1/07 1/07 <i>Pr</i> 1/07	epared /22 15:29 /22 15:29 /22 15:29 epared /22 15:29 Y/22 15:29 Sample Sample <u>%Rec</u> 79	Analyze           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 22           01/08/22 23           ID: Lab Con Prep Ty Prep I %Rec.           Limits           70 - 130	d       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         2:37       -         pe: Tope: Tope: Tope: Top	Dil Fa Dil Fa Dil Fa

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## **QC Sample Results**

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

Lab Sample ID: LCSD 880-1	6295/3-A					Clier	nt Sam	pie ID: I	ab Contro		
Matrix: Solid										ype: To	
Analysis Batch: 16324									Prep	Batch:	16295
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics			1000	922.7		mg/Kg		92	70 - 130	16	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1239		mg/Kg		124	70 - 130	12	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	116		70 - 130								
Lab Sample ID: 880-9971-A	-1-D MS							Client	Sample ID:	: Matrix	Spike
Matrix: Solid										ype: To	
Analysis Batch: 16324										Batch:	
· · · · · <b>,</b> · · · · · · · · · · · · · · · · · · ·	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	•	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9		996	917.2		mg/Kg		92	70 - 130		
(GRO)-C6-C10						5 5					
Diesel Range Organics (Over	<49.9	U	996	1140		mg/Kg		114	70 - 130		
C10-C28)											
	MS	мs									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	<u></u>	quamer	70 - 130								
o-Terphenyl	84		70 - 130								
	01		/01/00								
Lab Sample ID: 880-9971-A	-1-E MSD					CI	ient Sa	mple ID	: Matrix Sp	oike Dur	olicate
Matrix: Solid										ype: To	
Analysis Batch: 16324										Batch:	
,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	•	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<49.9		999	864.2		mg/Kg		87	70 - 130	6	20
(GRO)-C6-C10	1010	-								2	
Diesel Range Organics (Over	<49.9	U	999	1142		mg/Kg		114	70 - 130	0	20
C10-C28)											
	MSD	MSD									
Surrogato		MSD Qualifier	Limits								
Surrogate 1-Chlorooctane	%Recovery 82	Quaimer									
o-Terphenyl	84		70 - 130								

### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16432/1-A Matrix: Solid Analysis Batch: 16543						Client Sample ID: Method Bla Prep Type: Solul			
	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/13/22 21:45	1

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Project/Site: RDX 17-6

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### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-164	32/2-A						Client	Sampl	e ID: Lab C		
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16543											
			Spike		LCS				%Rec.		
Analyte			Added		Qualifier	Unit	<u>D</u>	%Rec	Limits		
Chloride			250	264.9		mg/Kg		106	90 - 110		
 Lab Sample ID: LCSD 880-16432/3-A						Clier	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid								·		Type: S	
Analysis Batch: 16543											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	270.8		mg/Kg		108	90 - 110	2	20
- Lab Sample ID: 890-1807-3 M	<b>NS</b>								Client Sar	nple ID:	SW13
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16543											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	278	F1	250	567.3	F1	mg/Kg		116	90 - 110		
- Lab Sample ID: 890-1807-3 M	MSD								Client Sar	nple ID:	SW13
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16543											
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	278	F1	250	567.6	F1	mg/Kg		116	90 - 110	0	20

Client: WSP USA Inc. Project/Site: RDX 17-6

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### Job ID: 890-1807-1 SDG: 31403360.006

**GC VOA** 

### Prep Batch: 16163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-1	SW11	Total/NA	Solid	5035	
890-1807-2	SW12	Total/NA	Solid	5035	
890-1807-3	SW13	Total/NA	Solid	5035	
890-1807-4	SW14	Total/NA	Solid	5035	
890-1807-5	SW15	Total/NA	Solid	5035	
890-1807-6	SW16	Total/NA	Solid	5035	
MB 880-16163/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16163/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16163/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1805-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 16202

MD 000-10103/3-A		TOLAI/INA	Soliu	5035		1
LCS 880-16163/1-A	Lab Control Sample	Total/NA	Solid	5035		8
LCSD 880-16163/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-1805-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		9
Analysis Batch: 16202						10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1807-1	SW11	Total/NA	Solid	8021B	16163	
890-1807-2	SW12	Total/NA	Solid	8021B	16163	
890-1807-3	SW13	Total/NA	Solid	8021B	16163	
890-1807-4	SW14	Total/NA	Solid	8021B	16163	
890-1807-5	SW15	Total/NA	Solid	8021B	16163	10
890-1807-6	SW16	Total/NA	Solid	8021B	16163	13
MB 880-16163/5-A	Method Blank	Total/NA	Solid	8021B	16163	
LCS 880-16163/1-A	Lab Control Sample	Total/NA	Solid	8021B	16163	
LCSD 880-16163/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16163	
890-1805-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B		
890-1805-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16163	

### Analysis Batch: 16668

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1807-1	SW11	Total/NA	Solid	Total BTEX	
890-1807-2	SW12	Total/NA	Solid	Total BTEX	
890-1807-3	SW13	Total/NA	Solid	Total BTEX	
890-1807-4	SW14	Total/NA	Solid	Total BTEX	
890-1807-5	SW15	Total/NA	Solid	Total BTEX	
890-1807-6	SW16	Total/NA	Solid	Total BTEX	

### GC Semi VOA

### Prep Batch: 16295

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1807-1	SW11	Total/NA	Solid	8015NM Prep	
890-1807-2	SW12	Total/NA	Solid	8015NM Prep	
890-1807-3	SW13	Total/NA	Solid	8015NM Prep	
890-1807-4	SW14	Total/NA	Solid	8015NM Prep	
890-1807-5	SW15	Total/NA	Solid	8015NM Prep	
890-1807-6	SW16	Total/NA	Solid	8015NM Prep	
MB 880-16295/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16295/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16295/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9971-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9971-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1807-1 SDG: 31403360.006

## GC Semi VOA

### Analysis Batch: 16324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-1	SW11	Total/NA	Solid	8015B NM	16295
890-1807-2	SW12	Total/NA	Solid	8015B NM	16295
890-1807-3	SW13	Total/NA	Solid	8015B NM	16295
890-1807-4	SW14	Total/NA	Solid	8015B NM	16295
890-1807-5	SW15	Total/NA	Solid	8015B NM	16295
MB 880-16295/1-A	Method Blank	Total/NA	Solid	8015B NM	16295
LCS 880-16295/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16295
LCSD 880-16295/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16295
880-9971-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	16295
880-9971-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16295

### Analysis Batch: 16326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-6	SW16	Total/NA	Solid	8015B NM	16295

### Analysis Batch: 16554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-1	SW11	Total/NA	Solid	8015 NM	
890-1807-2	SW12	Total/NA	Solid	8015 NM	
890-1807-3	SW13	Total/NA	Solid	8015 NM	
890-1807-4	SW14	Total/NA	Solid	8015 NM	
890-1807-5	SW15	Total/NA	Solid	8015 NM	
890-1807-6	SW16	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 16432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-1	SW11	Soluble	Solid	DI Leach	
890-1807-2	SW12	Soluble	Solid	DI Leach	
890-1807-3	SW13	Soluble	Solid	DI Leach	
890-1807-4	SW14	Soluble	Solid	DI Leach	
890-1807-5	SW15	Soluble	Solid	DI Leach	
890-1807-6	SW16	Soluble	Solid	DI Leach	
MB 880-16432/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16432/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16432/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1807-3 MS	SW13	Soluble	Solid	DI Leach	
890-1807-3 MSD	SW13	Soluble	Solid	DI Leach	

### Analysis Batch: 16543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1807-1	SW11	Soluble	Solid	300.0	16432
890-1807-2	SW12	Soluble	Solid	300.0	16432
890-1807-3	SW13	Soluble	Solid	300.0	16432
890-1807-4	SW14	Soluble	Solid	300.0	16432
890-1807-5	SW15	Soluble	Solid	300.0	16432
890-1807-6	SW16	Soluble	Solid	300.0	16432
MB 880-16432/1-A	Method Blank	Soluble	Solid	300.0	16432
LCS 880-16432/2-A	Lab Control Sample	Soluble	Solid	300.0	16432
LCSD 880-16432/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16432

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	 	 	- ,	
Client: WSP USA Inc.				
Project/Site: RDX 17-6				

### Job ID: 890-1807-1 SDG: 31403360.006

## HPLC/IC (Continued)

### Analysis Batch: 16543 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-1807-3 MS	SW13	Soluble	Solid	300.0	16432	
890-1807-3 MSD	SW13	Soluble	Solid	300.0	16432	

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Job ID: 890-1807-1 SDG: 31403360.006

### Lab Sample ID: 890-1807-1 Matrix: Solid

Lab Sample ID: 890-1807-2

Lab Sample ID: 890-1807-3

Lab Sample ID: 890-1807-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/06/22 11:15 Date Received: 01/06/22 14:27

Client Sample ID: SW11

Client: WSP USA Inc.

Project/Site: RDX 17-6

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 20:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16295	01/07/22 15:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/09/22 01:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16432	01/10/22 13:08	СН	XEN MID
Soluble	Analysis	300.0		1			16543	01/13/22 23:15	СН	XEN MID

## Client Sample ID: SW12

## Date Collected: 01/06/22 11:20

Date Received: 01/06/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 20:31	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16295	01/07/22 15:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/09/22 01:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16432	01/10/22 13:08	СН	XEN MID
Soluble	Analysis	300.0		1			16543	01/13/22 23:26	CH	XEN MID

## Client Sample ID: SW13

## Date Collected: 01/06/22 11:25

Date	Received:	01/06/22	14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 20:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16295	01/07/22 15:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/09/22 02:00	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16432	01/10/22 13:08	СН	XEN MID
Soluble	Analysis	300.0		1			16543	01/13/22 23:32	CH	XEN MID

### **Client Sample ID: SW14** Date Collected: 01/06/22 11:30 Date Received: 01/06/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 21:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

## Released to Imaging: 8/28/2024 3046921 PMM

Matrix: Solid

### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

## Client Sample ID: SW14

Date Collected: 01/06/22 11:30 Date Received: 01/06/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16295	01/07/22 15:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/09/22 02:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16432	01/10/22 13:08	СН	XEN MID
Soluble	Analysis	300.0		1			16543	01/13/22 23:51	СН	XEN MID

### Client Sample ID: SW15 Date Collected: 01/06/22 11:35

### Date Received: 01/06/22 14:27

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 21:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16295	01/07/22 15:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/09/22 02:41	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16432	01/10/22 13:08	СН	XEN MID
Soluble	Analysis	300.0		10			16543	01/13/22 23:57	СН	XEN MID

### Client Sample ID: SW16

Date Collected: 01/06/22 11:40 Date Received: 01/06/22 14:27 Lab Sample ID: 890-1807-6 Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16202	01/07/22 21:53	KL	XEN MIE
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MI
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MI
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16295	01/07/22 15:29	DM	XEN MI
Total/NA	Analysis	8015B NM		1			16326	01/08/22 22:37	AJ	XEN MI
Soluble	Leach	DI Leach			5 g	50 mL	16432	01/10/22 13:08	СН	XEN MI
Soluble	Analysis	300.0		10			16543	01/14/22 00:22	СН	XEN MI

### Laboratory References:

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

**Eurofins Carlsbad** 

uge 248 0J 481

Job ID: 890-1807-1 SDG: 31403360.006

### Lab Sample ID: 890-1807-4 Matrix: Solid

Client: WSP USA Inc. Project/Site: RDX 17-6

Laboratory: Eurofins Midland

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

hority	P	rogram	Identification Number	Expiration Date	
exas		NELAP T104704400-21-22 06-30-22			
The following analytes	are included in this report. b	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for wh	
the agency does not o	fer certification.	Matrix			
the agency does not o Analysis Method		Matrix	Analyte		
the agency does not o	fer certification.	Matrix Solid			

10

Job ID: 890-1807-1

SDG: 31403360.006

Eurofins Carlsbad

## **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1807-1 SDG: 31403360.006

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Eurofins Carlsbad

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1807-1 SDG: 31403360.006

Client Sample ID	Matrix	Collected	Received	Depth	
SW11	Solid	01/06/22 11:15	01/06/22 14:27	0 - 4	
SW12	Solid	01/06/22 11:20	01/06/22 14:27	0 - 4	
SW13	Solid	01/06/22 11:25	01/06/22 14:27	0 - 4	8
SW14	Solid	01/06/22 11:30	01/06/22 14:27	0 - 4	
SW15	Solid	01/06/22 11:35	01/06/22 14:27	0 - 4	
SW16	Solid	01/06/22 11:40	01/06/22 14:27	0 - 4	
					- 1
	SW12 SW13 SW14 SW15	SW11SolidSW12SolidSW13SolidSW14SolidSW15Solid	SW11         Solid         01/06/22 11:15           SW12         Solid         01/06/22 11:20           SW13         Solid         01/06/22 11:25           SW14         Solid         01/06/22 11:30           SW15         Solid         01/06/22 11:35	SW11         Solid         01/06/22 11:15         01/06/22 14:27           SW12         Solid         01/06/22 11:20         01/06/22 14:27           SW13         Solid         01/06/22 11:25         01/06/22 14:27           SW14         Solid         01/06/22 11:30         01/06/22 14:27           SW15         Solid         01/06/22 11:35         01/06/22 14:27	SW11       Solid       01/06/22 11:15       01/06/22 14:27       0 - 4         SW12       Solid       01/06/22 11:20       01/06/22 14:27       0 - 4         SW13       Solid       01/06/22 11:25       01/06/22 14:27       0 - 4         SW14       Solid       01/06/22 11:30       01/06/22 14:27       0 - 4         SW15       Solid       01/06/22 11:35       01/06/22 14:27       0 - 4

June Providence	of Xenco. A minimum charge of \$/5.00 will be applied to data project and a charge of 57.00 cash sample summer sources of the second sec	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenco will be liable only for the cost of samples and a charge of the casch sample submitted to Xenco. but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 200.8 / 6020: 8F Circle Method(s) and Metal(s) to be analyzed TCLF		Starter + V lings	Sw1 5 1135	Swill 1130	Siv 13 1125	SW12 1 1126	Swill 5 1/6/22 1115	Lab Sample Identification Matrix Sampled San	No	Yes No (N/A)	Kas No T	°c): 1.4.11.4	SAMPLE RECEIPT Temp Blank: We No No	PO #: ハイハータガ(1548ドイム Quote #:		Project Location Ealchy Convertes			Phone: (281) 762 - 2329	midu	Address: 3320 N A Street	Company Name: WSP USA	Project Manager: Juseph Hemander	Phoenix,AZ (48	LABORATORIES Midland,TX	XIINDO
	Signature) Date/Time	d purchase order from client company to Xenco y responsibility for any losses or expenses inc v to for each sample submitted to Xenco but r	8RCRA 13PPM Texas 11 Al Sb TCLP / SPLP 6010: 8RCRA Sb As B		8	5 1		5	R I	5 0-4/ 1	Sampled Depth Numb	per c		onta				Due Date:	Rush:	Routine D code	Turn Around	Email: anna byend (	City, State ZIP: Cau	Address: 53/S	Company Name: V-P	Bill to: (If different) J.o.	30) 355-0900 Atlanta,GA (770) 449-8800 Ti	Houston, i X (281) 240-4200 Dailas, i X (2 (432) 704-5440 EL Paso, TX (915) 585-344	Chain
- - - - - - - - - - - - - -	ime Relinguished by: (Signature)	i, its affiliates and subcontractors. It assigns standard terms and cond urred by the client if such losses are due to circumstances beyond the of analyzed. These terms will be enforced unless previously negotiated	1 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag								BTE CM			2 (	E				_		ANALYSIS REQUEST	@ wsp. com	Carisbad ion 88220	Buenav	WPX Energy	Jim Palera	Phoenix AZ (480) 355-0900 Atlanta GA (770) 449-8800 Tampa FL (813) 620-2000 West Palm Beach, FL (561) 689-6701	Houston, I X (281) 240-4200 Datas, I X (214) 902-0300 San Antonio, I X (210) 303-5554 Micland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Craslbad, NM (432) 704-5440	
	ure) Received by: (Signature)	terms and conditions ses beyond the control susly negotiated.	Mn Mo Ni K Se Ag SiO2 Na TI U						<u>الإلى</u>	Cost	0		TAT starts	890-1807 Chain of Custody Zn Aceta		HCL: HL	H2S04: H2		None: NO	MeOH: Me		Deliverables: EDUADaP1	evel III	State of Project:	Program: UST/PST PRP Brownfields RRC Superfund	Work Order Comments	1) 689-6701 <u>www.xenco.com</u> Page		Work Order No:
Revised Date 022619 Rev. 2019 1	Date/Time		Sr TI Sn U V Zn 1631/245.1/7470 /7471 : Hg						(pre 113 400)	Cost Center#:	Sample Comments	Tecelved by 4.00pm	TAT starts the day recevied by the lab, if	Zn Acetate+ NaOH: Zn	la I		HZ	5 HZ	0	Ме	Preservative Codes	Other:			RRCSuperfund	ts	ge r of r		

### Received by OCD: 7/19/2024 28:347:33 2AM

Released to Imaging: 8/28/2024 3:46:21 PM1



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14

Job Number: 890-1807-1 SDG Number: 31403360.006

List Source: Eurofins Carlsbad

## Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1807 List Number: 1 Creator: Clifton, Cloe

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-1807-1 SDG Number: 31403360.006

List Source: Eurofins Midland

List Creation: 01/07/22 12:52 PM

## Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1807 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-1816-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

## For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 1/17/2022 9:41:03 PM

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

LINKS Review your project results through Total Access Have a Question? Ask The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3546:21 PM4

Laboratory Job ID: 890-1816-1 SDG: 31403360.006

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Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1816-1

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SDG: 31403360.006

Qualifiers		- 3
GC VOA		
Qualifier	Qualifier Description	
*1	LCS/LCSD RPD exceeds control limits.	_
F1	MS and/or MSD recovery exceeds control limits.	5
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	λ	
Qualifier	Qualifier Description	
S1-	Surrogate recovery exceeds control limits, low biased.	8
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		9
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.	10
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.	12
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	13
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	

sample

DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the
DLC	Decision Level Concentration (Radiochemistry)

EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

Detection Limit (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

- MDC Minimum Detectable Concentration (Radiochemistry)
- MDLMethod Detection LimitMLMinimum 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

DL

- PRES Presumptive QC Quality Contr
- 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

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#### Job ID: 890-1816-1 SDG: 31403360.006

#### Job ID: 890-1816-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1816-1

#### Receipt

The samples were received on 1/11/2022 9:19 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 1.0°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH11 (890-1816-7) and (880-10173-A-61-C). Evidence of matrix interferences is not obvious.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: PH09 (890-1816-1) and (890-1816-A-1-F MS). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16761 and analytical batch 880-16927 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.

Method: 8021B - Volatile Organic Compounds (GC)

## **Client Sample Results**

RL

MDL Unit

D

Prepared

Clie	nt:	WSP	USA	Inc.
Pro	iect	/Site:	RDX	17-6

Sample Depth: 1

Analyte

### Client Sample ID: PH09

Date Collected: 01/10/22 13:16 Date Received: 01/11/22 09:19

# SDG: 31403360.006

Analyzed

01/13/22 10:56

01/13/22 10:56

01/13/22 10:56

01/13/22 10:56

01/13/22 10:56

01/13/22 10:56

Analyzed

01/13/22 10:56

01/13/22 10:56

Analyzed

01/17/22 14:41

Analyzed

01/17/22 14:06

Analyzed

01/12/22 21:46

01/12/22 21:46

01/12/22 21:46

Analyzed

01/12/22 21:46

01/12/22 21:46

Lab Sample ID: 890-1816-2

Dil Fac

1

1

1

1

1

Dil Fac

Matrix: Solid

Job ID: 890-1816-1

Matrix: Solid

Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.9           ge Organics (D)           Result           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9	Qualifier U RO) (GC) Qualifier U U U	RL           49.9           RL           49.9           49.9           49.9           49.9           49.9           70 - 130           70 - 130           70 - 130	MDL	Unit mg/Kg Unit mg/Kg mg/Kg	D	Prepared Prepared 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.9           ge Organics (D)           Result           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <6	Qualifier U RO) (GC) Qualifier U U Qualifier	49.9 <b>RL</b> 49.9 49.9 49.9 <u>Limits</u> 70 - 130		Unit mg/Kg mg/Kg		Prepared 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 <i>Prepared</i> 01/12/22 14:31
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <49.9           ge Organics (D)           Result           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9           <49.9	Qualifier U RO) (GC) Qualifier U U Qualifier	49.9 <b>RL</b> 49.9 49.9 49.9 <b>Limits</b>		Unit mg/Kg mg/Kg		Prepared 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31 Prepared
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U	49.9 <b>RL</b> 49.9 49.9 49.9		Unit mg/Kg mg/Kg		Prepared 01/12/22 14:31 01/12/22 14:31 01/12/22 14:31
Analyte Total TPH Method: 8015B NM - Diesel Ram Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 ge Organics (D) Result <49.9 <49.9	Qualifier U RO) (GC) Qualifier U U	49.9 <b>RL</b> 49.9 49.9		Unit mg/Kg mg/Kg		Prepared 01/12/22 14:3 01/12/22 14:3
Analyte Total TPH Method: 8015B NM - Diesel Ram Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D) Result Result <49.9	Qualifier U RO) (GC) Qualifier U	49.9 <b>RL</b> 49.9		mg/Kg Unit mg/Kg		Prepared
Analyte Total TPH Method: 8015B NM - Diesel Ram Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D) Result Result <49.9	Qualifier U RO) (GC) Qualifier U	49.9 <b>RL</b> 49.9		mg/Kg Unit mg/Kg		Prepared
Analyte Total TPH Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics	ge Organics (D Result	Qualifier U RO) (GC) Qualifier	49.9 		mg/Kg Unit		Prepared
Analyte Total TPH Method: 8015B NM - Diesel Ran	ge Organics (D	Qualifier U RO) (GC)	49.9		mg/Kg		
Analyte Total TPH	Result <49.9	Qualifier U		MDL		<u>D</u>	Prepared
Analyte	Result	Qualifier		MDL		<u>D</u>	Prepared
Analyte	Result	Qualifier		MDL		D	Prepared
wethou: 8015 NW - Diesel Range							
Mathed: 0045 NM Disect Dame	Organics (DR						
Total BTEX	<0.00398	U	0.00398		mg/Kg		
Analyte		Qualifier	RL	MDL		D	Prepared
Method: Total BTEX - Total BTE							
	110		/01/00				01/10/22 01.0
1,4-Difluorobenzene (Surr)	102		70 - 130 70 - 130				01/13/22 07:30
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 102	Qualifier	Limits 70 - 130				Prepared 01/13/22 07:30
Xylenes, Total	<0.00398	U F2 F1	0.00398		mg/Kg		01/13/22 07:30
o-Xylene	<0.00199	U F2 F1	0.00199		mg/Kg		01/13/22 07:30
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		01/13/22 07:30
Ethylbenzene	< 0.00199		0.00199		mg/Kg		01/13/22 07:30
	< 0.00199	U F1	0.00199		mg/Kg		01/13/22 07:30
Toluene		U F2 F1 *1	0.00199		mg/Kg		01/13/22 07:3

Result Qualifier

e	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
de	2620	25.0	mg/Kg			01/16/22 00:21	5

## Client Sample ID: PH09 Date Collected: 01/10/22 13:20 Date Received: 01/11/22 09:19

Sample Depth: 2

Method: 8021B - Volatile Orga	nic Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U *1	0.00199		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/13/22 07:30	01/13/22 11:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130				01/13/22 07:30	01/13/22 11:16	1

## **Client Sample Results**

Job ID: 890-1816-1 SDG: 31403360.006

# Lab Sample ID: 890-1816-2

Matrix: Solid

5

Date Collected: 01/10/22 13:20 Date Received: 01/11/22 09:19

**Client Sample ID: PH09** 

Client: WSP USA Inc.

Project/Site: RDX 17-6

Sample Depth: 2

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130				01/13/22 07:30	01/13/22 11:16	1
Method: Total BTEX - Total BTEX	Colculation								
Analyte		Qualifier	RL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398		mg/Kg			01/17/22 14:41	Dirta
Nothed: 2045 NM Discol Dance	Ormanica (DD)								
Method: 8015 NM - Diesel Range Analyte		Qualifier	RL	мы	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH			50.0				Fiepaieu	01/17/22 14:06	
	<50.0	U	50.0		mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 22:53	1
(GRO)-C6-C10									
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 22:53	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 22:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130				01/12/22 14:31	01/12/22 22:53	1
o-Terphenyl	88		70 - 130				01/12/22 14:31	01/12/22 22:53	1
- Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2990		25.0		mg/Kg			01/16/22 00:28	5
Client Sample ID: PH09							Lab San	nple ID: 890-	1816-3
Date Collected: 01/10/22 13:24									x: Solid
ate Received: 01/11/22 09:19									
Sample Depth: 4									

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/13/22 07:30	01/13/22 11:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130				01/13/22 07:30	01/13/22 11:37	1
1,4-Difluorobenzene (Surr)	87		70 - 130				01/13/22 07:30	01/13/22 11:37	1
Method: Total BTEX - Total BT	EX Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/17/22 14:41	1
Method: 8015 NM - Diesel Rar	ige Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

## **Client Sample Results**

Job ID: 890-1816-1
SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1816-3

## Client: WSP USA Inc. Project/Site: RDX 17-6

## **Client Sample ID: PH09**

Date Collected: 01/10/22 13:24 Date Received: 01/11/22 09:19

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/12/22 23:13	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/12/22 23:13	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/12/22 23:13	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	78		70 - 130				01/12/22 14:31	01/12/22 23:13	
o-Terphenyl	86		70 - 130				01/12/22 14:31	01/12/22 23:13	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyto									

#### **Client Sample ID: PH10**

#### Date Collected: 01/10/22 13:40 Date Received: 01/11/22 09:19

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/13/22 07:30	01/13/22 11:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130				01/13/22 07:30	01/13/22 11:58	1
1,4-Difluorobenzene (Surr)	105		70 - 130				01/13/22 07:30	01/13/22 11:58	1
Total BTEX	< 0.00401	U	0.00401		ma/Ka			01/17/22 14:41	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)			mg/Kg				1
Method: 8015 NM - Diesel Range Analyte	Organics (DR Result	O) (GC) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang	e Organics (DR Result <49.9 ge Organics (D	O) (GC) Qualifier U RO) (GC)	RL		Unit mg/Kg			Analyzed 01/17/22 14:06	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte	e Organics (DR Result <49.9 ge Organics (D Result	O) (GC) Qualifier U RO) (GC) Qualifier	RL		Unit mg/Kg Unit	D	Prepared	Analyzed 01/17/22 14:06 Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	e Organics (DR Result <49.9 ge Organics (D	O) (GC) Qualifier U RO) (GC) Qualifier	RL		Unit mg/Kg			Analyzed 01/17/22 14:06	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	e Organics (DR Result <49.9 ge Organics (D Result	O) (GC) Qualifier U RO) (GC) Qualifier U	RL		Unit mg/Kg Unit		Prepared	Analyzed 01/17/22 14:06 Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	e Organics (DR Result <49.9 ge Organics (D Result <49.9	O) (GC) Qualifier U RO) (GC) Qualifier U U	RL 49.9 RL 49.9		Unit mg/Kg Unit mg/Kg		Prepared 01/12/22 14:31	Analyzed 01/17/22 14:06 Analyzed 01/12/22 23:32	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte	e Organics (DR Result <49.9 ge Organics (D Result <49.9 <49.9	O) (GC) Qualifier U RO) (GC) Qualifier U U U	RL 49.9 RL 49.9 49.9		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 01/12/22 14:31 01/12/22 14:31	Analyzed 01/17/22 14:06 Analyzed 01/12/22 23:32 01/12/22 23:32	Dil Fac

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01/12/22 23:32

01/12/22 14:31

o-Terphenyl

70 - 130

86

		Clien	it Sample R	Results	;				
Client: WSP USA Inc.								Job ID: 890	-1816-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: PH10							Lab Sar	nple ID: 890-	1816-4
Date Collected: 01/10/22 13:40									x: Solid
Date Received: 01/11/22 09:19									
Sample Depth: 1									
-									
Method: 300.0 - Anions, Ion Chro									
Analyte		Qualifier		MDL		D	Prepared	Analyzed	Dil Fac
Chloride	879		4.96		mg/Kg			01/16/22 00:42	1
Client Sample ID: PH10							Lab Sar	nple ID: 890-	1816-5
Date Collected: 01/10/22 13:45								Matri	x: Solid
Date Received: 01/11/22 09:19									
Sample Depth: 2									
-	_								
Method: 8021B - Volatile Organio			51	MD	11		Burnard	American	D!! 5
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Benzene Toluene			0.00200		mg/Kg		01/13/22 11:00 01/13/22 11:00	01/14/22 16:04	1
	<0.00200		0.00200		mg/Kg			01/14/22 16:04	
Ethylbenzene	<0.00200		0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:04	1
m-Xylene & p-Xylene	< 0.00401		0.00401		mg/Kg		01/13/22 11:00	01/14/22 16:04	1
o-Xylene	<0.00200		0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/13/22 11:00	01/14/22 16:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130				01/13/22 11:00	01/14/22 16:04	1
1,4-Difluorobenzene (Surr)	93		70 - 130				01/13/22 11:00	01/14/22 16:04	1
– Method: Total BTEX - Total BTEX	(Calculation								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/17/22 14:41	1
— · · · · · · · · · · · · · · · · · · ·					5 5				
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:06	1
– Method: 8015B NM - Diesel Rang	no Organice (D								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics			50.0		mg/Kg		01/12/22 14:31	01/12/22 23:53	1
(GRO)-C6-C10	-00.0	-	00.0					2	
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 23:53	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 23:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130				01/12/22 14:31	01/12/22 23:53	1
o-Terphenyl	90		70 _ 130				01/12/22 14:31	01/12/22 23:53	1
_									
Method: 300.0 - Anions, Ion Chro					11	~	Drensus	A mail:	
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Chloride	3970		25.2		mg/Kg			01/16/22 01:04	5

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Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00202 U

<0.00202 U

<0.00202 U

<0.00403 U

## **Client Sample Results**

RL

0.00202

0.00202

0.00202

0.00403

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

01/13/22 11:00

01/13/22 11:00

01/13/22 11:00

01/13/22 11:00

Client:	WSP	USA	Inc.
Project	/Site:	RDX	17-6

Sample Depth: 4

Analyte

Benzene

Toluene

Ethylbenzene

m-Xylene & p-Xylene

### **Client Sample ID: PH10**

Date Collected: 01/10/22 13:49 Date Received: 01/11/22 09:19

Job ID: 890-1816-1 SDG: 31403360.006

## Lab Sample ID: 890-1816-6

Analyzed

01/14/22 16:24

01/14/22 16:24

01/14/22 16:24

01/14/22 16:24

Matrix: Solid

0.006	
816-6 Solid	
	5
Dil Fac 1	
1 1	
1 1	8
Dil Fac	9
1 1	
Dil Fac	
1	
Dil Fac	13

6:24	1
6:24	1
d	Dil Fac
1:41	1
d	Dil Fac
4:06	1
d	Dil Fac
0:14	1
	1

o-Xylene	<0.00202	U	0.00202		mg/Kg		01/13/22 11:00	01/14/22 16:24	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		01/13/22 11:00	01/14/22 16:24	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	129		70 - 130				01/13/22 11:00	01/14/22 16:24	
1,4-Difluorobenzene (Surr)	94		70 - 130				01/13/22 11:00	01/14/22 16:24	1
Method: Total BTEX - Total BTEX	<b>Calculation</b>								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			01/17/22 14:41	1
Method: 8015 NM - Diesel Range	organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (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		01/12/22 14:31	01/13/22 00:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 00:14	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 00:14	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				01/12/22 14:31	01/13/22 00:14	1
o-Terphenyl	86		70 - 130				01/12/22 14:31	01/13/22 00:14	1
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	1510		49.7		mg/Kg			01/16/22 01:11	10

Sample Depth: 1

Method: 8021B - Volatile Orga	d: 8021B - Volatile Organic Compounds (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/13/22 11:00	01/14/22 16:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130				01/13/22 11:00	01/14/22 16:45	1

## **Client Sample Results**

Job ID: 890-1816-1 SDG: 31403360.006

Matrix: Solid

5

## Client Sample ID: PH11

Date Collected: 01/10/22 14:03 Date Received: 01/11/22 09:19

Sample Depth: 1

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	73		70 - 130				01/13/22 11:00	01/14/22 16:45	
Method: Total BTEX - Total BTEX	(Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/17/22 14:41	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:06	
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/13/22 00:34	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/13/22 00:34	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/13/22 00:34	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	79		70 - 130				01/12/22 14:31	01/13/22 00:34	
o-Terphenyl	88		70 - 130				01/12/22 14:31	01/13/22 00:34	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	1580		24.8		mg/Kg			01/16/22 01:18	:
lient Sample ID: PH11							Lab Sar	nple ID: 890-	1816-8
ate Collected: 01/10/22 14:10								Matri	x: Solic
ate Received: 01/11/22 09:19									
ample Depth: 2									
Method: 8021B - Volatile Organic	c Compounds (	GC)							

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 _ 130				01/13/22 11:00	01/14/22 17:05	1
1,4-Difluorobenzene (Surr)	74		70 _ 130				01/13/22 11:00	01/14/22 17:05	1
– Method: Total BTEX - Total BT	EX Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/17/22 14:41	1
– Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:06	1

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Lab Sample ID: 890-1816-7

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<49.9 U

<49.9 U

<49.9 U

%Recovery Qualifier

74

83

1760

Result Qualifier

## **Client Sample Results**

RL

49.9

49.9

49.9

RL

25.1

Limits

70 - 130

70 - 130

MDL Unit

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Job ID: 890-1816-1
SDG: 31403360.006

## Client Sample ID: PH11

Client: WSP USA Inc. Project/Site: RDX 17-6

Sample Depth: 2

(GRO)-C6-C10

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

**Client Sample ID: PH11** 

Date Collected: 01/10/22 14:13

Date Received: 01/11/22 09:19

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

Chloride

Sample Depth: 4

1-Chlorooctane

Date Collected: 01/10/22 14:10 Date Received: 01/11/22 09:19

## Lab Sample ID: 890-1816-8

Analyzed

01/13/22 00:54

01/13/22 00:54

01/13/22 00:54

Analyzed

01/13/22 00:54

01/13/22 00:54

Analyzed

01/16/22 01:25

Lab Sample ID: 890-1816-9

Prepared

01/12/22 14:31

01/12/22 14:31

01/12/22 14:31

Prepared

01/12/22 14:31

01/12/22 14:31

Prepared

D

D

Matrix: Solid

Dil Fac

1

1

1

5

Dil Fac

Dil Fac

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		01/13/22 11:00	01/14/22 17:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 17:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 17:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 17:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130				01/13/22 11:00	01/14/22 17:26	1
1,4-Difluorobenzene (Surr)	96		70 - 130				01/13/22 11:00	01/14/22 17:26	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			01/17/22 14:41	1
Method: 8015 NM - Diesel Range	- · ·			MDI	11		Description	A	Dil Fac
	<pre></pre>	Qualifier		MDL		D	Prepared	Analyzed 01/17/22 14:06	
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:06	1
 Method: 8015B NM - Diesel Range	organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 01:14	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 01:14	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 01:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130				01/12/22 14:31	01/13/22 01:14	1
o-Terphenyl	83		70 - 130				01/12/22 14:31	01/13/22 01:14	1

		Clien	t Sample R	esults	;				
Client: WSP USA Inc.								Job ID: 890	)-1816-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: PH11							Lab San	nple ID: 890-	1816-9
Date Collected: 01/10/22 14:13								Matri	ix: Solid
Date Received: 01/11/22 09:19									
Sample Depth: 4									
—									
Method: 300.0 - Anions, Ion Chi	• • • •	Soluble Qualifier	RL	MDL	11	D	Dremered	Amelymed	Dil Fac
Analyte Chloride		Quaimer	49.9	MDL	mg/Kg		Prepared	Analyzed 01/16/22 01:32	10
_	2000								
Client Sample ID: PH12							Lab Sam	ple ID: 890-1	816-10
Date Collected: 01/10/22 14:30								Matri	ix: Solid
Date Received: 01/11/22 09:19									
Sample Depth: 1									
	ic Compounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/13/22 11:00	01/14/22 17:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130				01/13/22 11:00	01/14/22 17:46	1
1,4-Difluorobenzene (Surr)	79		70 - 130				01/13/22 11:00	01/14/22 17:46	1
Method: Total BTEX - Total BTE		0				_	- ·		
		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	0	0.00402		mg/Kg			01/17/22 14:41	1
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Ran	ae Organics (D								
Analyte		Qualifier	RL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9		49.9		mg/Kg		01/12/22 14:31	01/13/22 01:34	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		01/12/22 14:31	01/13/22 01:34	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9		49.9		mg/Kg		01/12/22 14:31	01/13/22 01:34	1
		0	40.0		ilig/itg		01/12/22 14.01	01110/22 01:04	I
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130				01/12/22 14:31	01/13/22 01:34	1
o-Terphenyl	90		70 - 130				01/12/22 14:31	01/13/22 01:34	1
– Method: 300.0 - Anions, Ion Chi	romatography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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## **Client Sample Results**

Client:	WSP	USA	Inc.
Project	/Site:	RDX	17-6

## Client Sample ID: PH12

Date Collected: 01/10/22 14:34 Date Received: 01/11/22 09:19

Sample Depth: 2

Job ID: 890-1816-1 SDG: 31403360.006

## Lab Sample ID: 890-1816-11

Matrix: Solid

Method: 8021B - Volatile Organic Cor Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene		U	0.00199		mg/Kg		01/13/22 11:00	01/14/22 18:06	1
Toluene	< 0.00199		0.00199		mg/Kg		01/13/22 11:00	01/14/22 18:06	1
Ethylbenzene	< 0.00199		0.00199		mg/Kg		01/13/22 11:00	01/14/22 18:06	1
m-Xylene & p-Xylene	< 0.00398		0.00398		mg/Kg		01/13/22 11:00	01/14/22 18:06	
o-Xylene	< 0.00199		0.00199		mg/Kg		01/13/22 11:00	01/14/22 18:06	1
Xylenes, Total	<0.00398		0.00398		mg/Kg		01/13/22 11:00	01/14/22 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130				01/13/22 11:00	01/14/22 18:06	1
1,4-Difluorobenzene (Surr)	78		70 - 130				01/13/22 11:00	01/14/22 18:06	1
Method: Total BTEX - Total BTEX Cal	culation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/17/22 14:41	1
Method: 8015 NM - Diesel Range Org	anics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Range Or	ganics (D	RO) (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		01/12/22 14:31	01/13/22 02:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 02:15	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 02:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				01/12/22 14:31	01/13/22 02:15	1
o-Terphenyl	89		70 - 130				01/12/22 14:31	01/13/22 02:15	1
Method: 300.0 - Anions, Ion Chromat	ography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2000		25.2		mg/Kg			01/16/22 02:00	5
lient Sample ID: PH12							Lab Sam	ple ID: 890-18	816-12
ate Collected: 01/10/22 14:40 ate Received: 01/11/22 09:19								Matri	x: Solid
ample Depth: 4									
Method: 8021B - Volatile Organic Cor	nnounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198		0.00198		mg/Kg		01/13/22 11:00	01/14/22 18:27	1
Toluene	< 0.00198		0.00198		mg/Kg		01/13/22 11:00	01/14/22 18:27	1
Ethylbenzene	< 0.00198		0.00198		mg/Kg		01/13/22 11:00	01/14/22 18:27	1
m-Xylene & p-Xylene	<0.00396		0.00396		mg/Kg		01/13/22 11:00	01/14/22 18:27	' 1
o-Xylene	<0.00390		0.00198		mg/Kg		01/13/22 11:00	01/14/22 18:27	1
Xylenes, Total	<0.00198		0.00396		mg/Kg		01/13/22 11:00	01/14/22 18:27	1
Nyionoo, lotai	~0.00390	5	0.00090		mg/rxy		J 1/ 1J/22 11.00		I
Surrogate	%Recovery	Qualifiar	Limits				Prepared	Analyzed	Dil Fac

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1/17/2022

## **Client Sample Results**

SDG: 31403360.006

## Lab Sample ID: 890-1816-12

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac

Dil Fac

1

1

1

1

1

1

1

1

Dil Fac

5

Date Collected: 01/10/22 14:40 Date Received: 01/11/22 09:19

**Client Sample ID: PH12** 

Sample Depth: 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed
1,4-Difluorobenzene (Surr)	81		70 - 130				01/13/22 11:00	01/14/22 18:27
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
Total BTEX	<0.00396	U	0.00396		mg/Kg			01/17/22 14:41
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:06
Method: 8015B NM - Diesel Rang Analyte	· · ·	RO) (GC) Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
	Result	Qualifier	KL	MDL	Unit	U	Prepared	Analyzed
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 02:35
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.0		50.0 50.0		mg/Kg mg/Kg		01/12/22 14:31 01/12/22 14:31	01/13/22 02:35
Gasoline Range Organics (GRO)-C6-C10		U						
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0	U U	50.0		mg/Kg		01/12/22 14:31	01/13/22 02:35
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 <50.0	U U	50.0 50.0		mg/Kg		01/12/22 14:31 01/12/22 14:31	01/13/22 02:35 01/13/22 02:35

Analyte	Result Q	Qualifier RL	MDL Un	nit D	Prepared	Analyzed	Dil Fac
Chloride	1790	24.9	mg	g/Kg		01/17/22 15:59	5

Job ID: 890-1816-1

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 880-10173-A-61-D MS Matrix Spike 97 109 880-10173-A-61-E MSD Matrix Spike Duplicate 106 107 890-1816-1 PH09 102 115 PH09 890-1816-1 MS 86 114 890-1816-1 MSD PH09 133 S1+ 138 S1+ PH09 890-1816-2 105 84 890-1816-3 PH09 73 87 PH10 105 890-1816-4 81 890-1816-5 PH10 113 93 890-1816-6 PH10 129 94 890-1816-7 PH11 134 S1+ 73 890-1816-8 PH11 124 74 890-1816-9 PH11 129 96 890-1816-10 PH12 127 79 PH12 122 78 890-1816-11 890-1816-12 PH12 81 122 LCS 880-16655/1-A Lab Control Sample 108 105 LCS 880-16731/1-A Lab Control Sample 100 107 LCSD 880-16655/2-A Lab Control Sample Dup 81 102 LCSD 880-16731/2-A Lab Control Sample Dup 106 104 MB 880-16655/5-A Method Blank 74 85 MB 880-16731/5-A Method Blank 100 98

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1816-1	PH09	66 S1-	74
890-1816-1 MS	PH09	65 S1-	65 S1-
890-1816-1 MSD	PH09	76	75
890-1816-2	PH09	79	88
890-1816-3	PH09	78	86
890-1816-4	PH10	79	86
890-1816-5	PH10	80	90
890-1816-6	PH10	78	86
890-1816-7	PH11	79	88
890-1816-8	PH11	74	83
890-1816-9	PH11	75	83
890-1816-10	PH12	80	90
890-1816-11	PH12	78	89
890-1816-12	PH12	72	81
LCS 880-16679/2-A	Lab Control Sample	104	105
LCSD 880-16679/3-A	Lab Control Sample Dup	97	100
MB 880-16679/1-A	Method Blank	78	88

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Prep Type: Total/NA

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#### Job ID: 890-1816-1 SDG: 31403360.006

Prep Type: Total/NA

## **Surrogate Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl Job ID: 890-1816-1 SDG: 31403360.006

Client: WSP USA Inc.

Job ID: 890-1816-1 SDG: 31403360.006

## Project/Site: RDX 17-6 Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16655/5	5-A										Client S	ample ID:	Method	d Blan
Matrix: Solid												Prep 1	Гуре: То	otal/N
Analysis Batch: 16697													Batch:	
-		ΜВ	мв											
Analyte	Re	sult	Qualifier	RL		MDL	Unit		D	Pi	repared	Analyz	zed	Dil Fa
Benzene	<0.00	200	U	0.00200			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
Toluene	<0.00	200	U	0.00200			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
Ethylbenzene	<0.00	200	U	0.00200			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
m-Xylene & p-Xylene	<0.00	400	U	0.00400			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
o-Xylene	<0.00	200	U	0.00200			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
Xylenes, Total	<0.00	400	U	0.00400			mg/Kg			01/1:	3/22 07:30	01/13/22	10:28	
		ΜВ	МВ											
Surrogate	%Recov		Qualifier	Limits						Pi	repared	Analyz	zed	Dil Fa
4-Bromofluorobenzene (Surr)		85		70 - 130					_	01/1	3/22 07:30	01/13/22	10:28	
1,4-Difluorobenzene (Surr)		74		70 - 130						01/1	3/22 07:30	01/13/22	10:28	
Lab Sample ID: LCS 990 46655	14 A								<b>C</b> 11	<b>.</b>	Sample		ontrol C	
Lab Sample ID: LCS 880-16655/ Matrix: Solid	1-A								CII	ent	Sample	ID: Lab C	опатої з Гуре: То	
													Batch:	
Analysis Batch: 16697				Spike	105	LCS						%Rec.	Datch.	. 100;
Analyte				Added	Result		fior	Unit		D	%Rec	Limits		
Benzene				0.100	0.1148	Quan		mg/Kg		_	115	70 - 130		
Toluene				0.100	0.1140						114	70 - 130 70 - 130		
				0.100	0.1140			mg/Kg mg/Kg			101	70 - 130 70 - 130		
Ethylbenzene								mg/Kg				70 - 130 70 - 130		
m Vulana 8 n Vulana											104			
				0.200	0.2082						103			
				0.200 0.100	0.2082			mg/Kg			103	70 - 130		
	LCS	LCS									103			
o-Xylene		LCS Quali	ifier								103			
o-Xylene Surrogate			ifier	0.100							103			
o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery		ifier	0.100 <i>Limits</i>							103			
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130				mg/Kg	ent S	Sam		70 - 130	ol Samp	ble Du
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130				mg/Kg	ent S	Sam		70 <sub>-</sub> 130 .ab Contro		
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130				mg/Kg	ent S	Sam		70 - 130 .ab Contro Prep 1	Гуре: То	otal/N
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130		LCSE		mg/Kg	ent S	Sam		70 - 130 .ab Contro Prep 1		otal/N : 1665
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130 70 - 130	0.1034		,	mg/Kg	ent S	Sam		70 - 130 .ab Contro Prep 1 Prep	Гуре: То	otal/N : 166 RF
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	0.1034	Quali	) fier	mg/Kg Cli	ent S		ple ID: L	70 - 130 .ab Contro Prep %Rec.	Type: To Batch:	otal/N : 166 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene	%Recovery 108 105		ifier	0.100 <i>Limits</i> 70 - 130 70 - 130 Spike Added	0.1034 LCSD Result	Quali	) fier	Cli Unit	ent S		ple ID: L	70 - 130 .ab Contro Prep %Rec. Limits	RPD	otal/N : 166 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene	%Recovery 108 105		ifier	0.100 Limits 70 - 130 70 - 130 Spike Added 0.100	0.1034 LCSD Result 0.07142	Quali	) fier	Cli Unit mg/Kg	ent S		<b>ple ID: L</b> %Rec 71 -	70 - 130 .ab Contro Prep %Rec. Limits 70 - 130	Type: To Batch: RPD 47	otal/N : 166 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene	%Recovery 108 105		ifier	0.100 Limits 70 - 130 70 - 130 Spike Added 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461	Quali	) fier	Cli Unit mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <mark>%Rec</mark> 71 85	70 - 130 .ab Contro Prep %Rec. Limits 70 - 130 70 - 130	Type: To Batch: RPD 47 30	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	%Recovery 108 105		ifier	0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> %Rec 71 85 81	70 - 130 <b></b>	RPD           47           30           22	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	%Recovery 108 105 5/2-A	Qual		0.100 Limits 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34	otal/N : 1665 RP 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	%Recovery 108 105 5/2-A	Quali		0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	%Recovery 108 105 5/2-A <i>LCSD</i> %Recovery	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Limits	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34	otal/N : 1665 RP 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 108 105 5/2-A <i>LCSD</i> %Recovery	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Limits	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 	RPD           47           30           22           34           34	otal/N : 1665 RF 
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1816-1 MS	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 .ab Contro Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	RPD           47           30           22           34           34	otal/N : 1665 RF Lin : : : :
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1816-1 MS Matrix: Solid	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81	Quali		0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 .ab Contro Prep %Rec. Limits 70 - 130 70 - 190 70	RPD           47           30           22           34           34	otal/N : 1665 RF Lim : : : : : : : : : : : : : : : : : : :
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1816-1 MS Matrix: Solid	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81	Quali LCSI Quali	) ifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478 0.07332	Quali	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 .ab Contro Prep %Rec. Limits 70 - 130 70 - 190 70	Type: To Batch:	otal/N : 1665 RP Lim 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1665 Matrix: Solid Analysis Batch: 16697 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	%Recovery 108 105 5/2-A 5/2-A <i>LCSD</i> %Recovery 81 102	Quali LCSL Quali	) ifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Umits 70 - 130 70 - 130	0.1034 LCSD Result 0.07142 0.08461 0.08101 0.1478 0.07332	Quali *1	) fier	Cli Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent S		<b>ple ID: L</b> <b>%Rec</b> 71 85 81 74	70 - 130 <b>.ab Contro</b> <b>Prep</b> %Rec. Limits 70 - 130 70 - 190 <b>Client Sat</b> <b>Prep</b>	Type: To Batch:	otal/N : 1665 RP Lim 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

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Lab Sample ID: 890-1816-1 MS

## QC Sample Results

Client: WSP USA Inc. Project/Site: RDX 17-6

Matrix: Solid

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

Job ID: 890-1816-1 SDG: 31403360.006	
Client Sample ID: PH09	
Prep Type: Total/NA	
Prep Batch: 16655	5
%Rec.	

Limits

70 - 130

70 - 130

70 - 130

70 - 130

#### Analysis Batch: 16697 Sample Sample Spike MS MS Analyte Result Qualifier Added **Result Qualifier** Unit %Rec D Toluene <0.00199 UF1 0.0998 0.06928 F1 69 mg/Kg Ethylbenzene <0.00199 UF1 0.0998 0.06297 F1 mg/Kg 63 <0.00398 UF1 0.200 61 m-Xylene & p-Xylene 0.1209 F1 mg/Kg 0.0998 o-Xylene <0.00199 U F2 F1 0.06076 F1 mg/Kg 61 MS MS

		in o	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 _ 130
1,4-Difluorobenzene (Surr)	114		70 - 130

#### Lab Sample ID: 890-1816-1 MSD Matrix: Solid

## Analysis Batch: 16607

Analysis Batch: 16697										Batch:	16655
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U F2 F1 *1	0.100	0.05485	F2 F1	mg/Kg		55	70 - 130	49	35
Toluene	<0.00199	U F1	0.100	0.09455		mg/Kg		94	70 - 130	31	35
Ethylbenzene	<0.00199	U F1	0.100	0.08768		mg/Kg		88	70 - 130	33	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1630		mg/Kg		81	70 - 130	30	35
o-Xylene	<0.00199	U F2 F1	0.100	0.1153	F2	mg/Kg		115	70 <sub>-</sub> 130	62	35
	MSD	MSD									

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	138	S1+	70 - 130

98

#### Lab Sample ID: MB 880-16731/5-A Matrix: Solid

## Analysis Batch: 16809

-	MB	МВ						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/13/22 11:00	01/14/22 10:36	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				01/13/22 11:00	01/14/22 10:36	1

70 - 130

#### 1,4-Difluorobenzene (Surr)

#### Lab Sample ID: LCS 880-16731/1-A Matrix: Solid

#### Analysis Batch: 16809

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08796		mg/Kg		88	70 - 130	
Toluene	0.100	0.07568		mg/Kg		76	70 - 130	

7

Client Sample ID: PH09

Prep Type: Total/NA

#### **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 16731

#### **Client Sample ID: Lab Control Sample** Prep Type: Total/NA Prep Batch: 16731

01/14/22 10:36

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01/13/22 11:00

## **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1816-1

SDG: 31403360.006

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

Lab Sample ID: LCS 880-167	731/1 <b>-A</b>						Client	Sample	ID: Lab Co		
Matrix: Solid										ype: To	
Analysis Batch: 16809									Prep	Batch:	16731
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene			0.100	0.07869		mg/Kg		79	70 - 130		
m-Xylene & p-Xylene			0.200	0.1620		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.07612		mg/Kg		76	70 - 130		
	LCS	LCS									
Surrogate	%Recovery		Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	107		70 - 130								
Lab Sample ID: LCSD 880-1	6731/2-4					Clie	nt Sam	nle ID: I	Lab Contro	l Samnl	e Dun
Matrix: Solid						Unit.	int our			ype: To	
Analysis Batch: 16809										Batch:	
Analysis Baten. 10000			Spike	LCSD	LCSD				%Rec.	Batern.	RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			0.100	0.08855		mg/Kg		89	70 - 130	1	35
Toluene			0.100	0.07522		mg/Kg		75	70 - 130	1	35
Ethylbenzene			0.100	0.07865		mg/Kg		79	70 _ 130	0	35
m-Xylene & p-Xylene			0.200	0.1614		mg/Kg		81	70 _ 130	0	35
o-Xylene			0.100	0.08275		mg/Kg		83	70 - 130	8	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		70 - 130								
1,4-Difluorobenzene (Surr)	104		70 - 130								
Lab Sample ID: 880-10173-A	A-61-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 16809										Batch:	
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00199	U	0.0996	0.09690		mg/Kg		97	70 - 130		
Toluene	<0.00199	U	0.0996	0.08816		mg/Kg		87	70 _ 130		
Ethylbenzene	<0.00199	U	0.0996	0.09067		mg/Kg		91	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

<0.00199 U

#### Lab Sample ID: 880-10173-A-61-E MSD Matrix: Solid

## Analysis Batch: 16809

o-Xylene

Analysis Batch: 16809									Prep Batch: 16731					
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Benzene	< 0.00199	U	0.100	0.09933		mg/Kg		99	70 - 130	2	35			
Toluene	<0.00199	U	0.100	0.08934		mg/Kg		88	70 - 130	1	35			
Ethylbenzene	<0.00199	U	0.100	0.09031		mg/Kg		90	70 - 130	0	35			
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1874		mg/Kg		94	70 - 130	0	35			
o-Xylene	<0.00199	U	0.100	0.09089		mg/Kg		90	70 - 130	1	35			

0.0996

0.09180

mg/Kg

92

70 - 130

Client Sample ID: Matrix Spike Duplicate

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Prep Type: Total/NA

Client: WSP USA Inc.

Project/Site: RDX 17-6

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#### Job ID: 890-1816-1 SDG: 31403360.006

Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 16679

Client Sample ID: Lab Control Sample Dup

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

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-16679/1-	A						Client Sa	mple ID: Metho	d Blank
Matrix: Solid								Prep Type: 1	Total/NA
Analysis Batch: 16627								Prep Batch	n: 16679
-	МВ	МВ						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 20:35	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 20:35	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 20:35	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				01/12/22 14:31	01/12/22 20:35	1
o-Terphenyl	88		70 - 130				01/12/22 14:31	01/12/22 20:35	1
 Lab Sample ID: LCS 880-16679/2								D: Lab Control	0

#### Matrix: Solid Analysis Batch: 16627

Analysis Batch: 16627							Prep	Batch: 16679
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	854.1		mg/Kg		85	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	996.3		mg/Kg		100	70 <sub>-</sub> 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	105		70 - 130

#### Lab Sample ID: LCSD 880-16679/3-A Matrix: Solid

Analysis Batch: 16627	

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	925.9		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	1000		mg/Kg		100	70 - 130	0	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-1816-1 MS

Lab Sample ID: 890-1816-1 MSD

## QC Sample Results

MS MS

MSD MSD

852.4

1009

Result Qualifier

754.3

840.3

Result Qualifier

Unit

mg/Kg

mg/Kg

Unit

mg/Kg

mg/Kg

D

%Rec

76

82

99

Spike

Added

996

996

Limits

70 - 130

70 - 130

Spike

Added

999

999

Analysis Batch: 16627

Gasoline Range Organics

Diesel Range Organics (Over

Analysis Batch: 16627

Gasoline Range Organics

**Diesel Range Organics (Over** 

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

C10-C28)

1-Chlorooctane

Matrix: Solid

(GRO)-C6-C10

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

Sample Sample

<49.9 U

<49.9 U

MS MS %Recovery Qualifier

65 S1-

65 S1-

Sample Sample

<49.9 U

<49.9 U

MSD MSD

**Result Qualifier** 

Result Qualifier

**Client Sample ID: PH09** 

Prep Type: Total/NA

Prep Batch: 16679

	5
	7
	8
	9

Client Sample ID: PH09
Prep Type: Total/NA
Prep Batch: 16679
%Rec. RPD

Fiebi	ype.	ισια	
Prep	Batc	h: 16	679
%Rec.			RPD

18

20

		Prep Batch: 16679							
		%Rec.		RPD					
D	%Rec	Limits	RPD	Limit					
	85	70 - 130	12	20					

70 - 130

%Rec.

Limits

70 - 130

70 - 130

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	76		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: MB 880-16761/1-A										Client S	Sample ID: Me	ethod	Blank
Matrix: Solid											Prep Ty	pe: S	oluble
Analysis Batch: 16927													
	MB	МВ											
Analyte	Result	Qualifier		RL		MDL	Unit		D	Prepared	Analyzed		Dil Fac
Chloride	<5.00	U		5.00			mg/Kg				01/15/22 23:	39	1
Lab Sample ID: LCS 880-16761/2-A									Clier	nt Sample	ID: Lab Con	trol S	ample
Matrix: Solid											Prep Ty	pe: S	oluble
Analysis Batch: 16927													
			Spike		LCS	LCS					%Rec.		
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits		
Chloride			250		267.8			mg/Kg		107	90 - 110		
Lab Sample ID: LCSD 880-16761/3-A								CI	ient Sa	mple ID:	Lab Control S	Sampl	le Dup
Matrix: Solid											Prep Ty	pe: S	oluble
Analysis Batch: 16927													
			Spike		LCSD	LCS	D				%Rec.		RPD
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		269.6			mg/Kg		108	90 - 110	1	20

## **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1816-1 SDG: 31403360.006

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1816-10 MS									<b>Client Sar</b>	nple ID:	PH12
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16927											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	1210		253	1407	4	mg/Kg		78	90 - 110		
Lab Sample ID: 890-1816-10 MSD									Client Sar	nple ID:	PH12
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16927											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	1210		253	1406	4	mg/Kg		78	90 _ 110	0	20

## **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

#### Job ID: 890-1816-1 SDG: 31403360.006

# GC VOA

## Prep Batch: 16655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-1	PH09	Total/NA	Solid	5035	
890-1816-2	PH09	Total/NA	Solid	5035	
890-1816-3	PH09	Total/NA	Solid	5035	
890-1816-4	PH10	Total/NA	Solid	5035	
MB 880-16655/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16655/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16655/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1816-1 MS	PH09	Total/NA	Solid	5035	
890-1816-1 MSD	PH09	Total/NA	Solid	5035	

#### Analysis Batch: 16697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-1	PH09	Total/NA	Solid	8021B	16655
890-1816-2	PH09	Total/NA	Solid	8021B	16655
890-1816-3	PH09	Total/NA	Solid	8021B	16655
890-1816-4	PH10	Total/NA	Solid	8021B	16655
MB 880-16655/5-A	Method Blank	Total/NA	Solid	8021B	16655
LCS 880-16655/1-A	Lab Control Sample	Total/NA	Solid	8021B	16655
LCSD 880-16655/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16655
890-1816-1 MS	PH09	Total/NA	Solid	8021B	16655
890-1816-1 MSD	PH09	Total/NA	Solid	8021B	16655

#### Prep Batch: 16731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-5	PH10	Total/NA	Solid	5035	
890-1816-6	PH10	Total/NA	Solid	5035	
890-1816-7	PH11	Total/NA	Solid	5035	
890-1816-8	PH11	Total/NA	Solid	5035	
890-1816-9	PH11	Total/NA	Solid	5035	
890-1816-10	PH12	Total/NA	Solid	5035	
890-1816-11	PH12	Total/NA	Solid	5035	
890-1816-12	PH12	Total/NA	Solid	5035	
MB 880-16731/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16731/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16731/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10173-A-61-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10173-A-61-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 16809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-5	PH10	Total/NA	Solid	8021B	16731
890-1816-6	PH10	Total/NA	Solid	8021B	16731
890-1816-7	PH11	Total/NA	Solid	8021B	16731
890-1816-8	PH11	Total/NA	Solid	8021B	16731
890-1816-9	PH11	Total/NA	Solid	8021B	16731
890-1816-10	PH12	Total/NA	Solid	8021B	16731
890-1816-11	PH12	Total/NA	Solid	8021B	16731
890-1816-12	PH12	Total/NA	Solid	8021B	16731
MB 880-16731/5-A	Method Blank	Total/NA	Solid	8021B	16731
LCS 880-16731/1-A	Lab Control Sample	Total/NA	Solid	8021B	16731
LCSD 880-16731/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16731

Job ID: 890-1816-1 SDG: 31403360.006

## GC VOA (Continued)

## Analysis Batch: 16809 (Continued)

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
880-10173-A-61-D MS	Matrix Spike	Total/NA	Solid	8021B	16731
880-10173-A-61-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16731

#### Analysis Batch: 17056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-1	PH09	Total/NA	Solid	Total BTEX	
890-1816-2	PH09	Total/NA	Solid	Total BTEX	
890-1816-3	PH09	Total/NA	Solid	Total BTEX	
890-1816-4	PH10	Total/NA	Solid	Total BTEX	
890-1816-5	PH10	Total/NA	Solid	Total BTEX	
890-1816-6	PH10	Total/NA	Solid	Total BTEX	
890-1816-7	PH11	Total/NA	Solid	Total BTEX	
890-1816-8	PH11	Total/NA	Solid	Total BTEX	
890-1816-9	PH11	Total/NA	Solid	Total BTEX	
890-1816-10	PH12	Total/NA	Solid	Total BTEX	
890-1816-11	PH12	Total/NA	Solid	Total BTEX	
890-1816-12	PH12	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Analysis Batch: 16627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-1	PH09	Total/NA	Solid	8015B NM	16679
890-1816-2	PH09	Total/NA	Solid	8015B NM	16679
890-1816-3	PH09	Total/NA	Solid	8015B NM	16679
890-1816-4	PH10	Total/NA	Solid	8015B NM	16679
890-1816-5	PH10	Total/NA	Solid	8015B NM	16679
890-1816-6	PH10	Total/NA	Solid	8015B NM	16679
890-1816-7	PH11	Total/NA	Solid	8015B NM	16679
890-1816-8	PH11	Total/NA	Solid	8015B NM	16679
890-1816-9	PH11	Total/NA	Solid	8015B NM	16679
890-1816-10	PH12	Total/NA	Solid	8015B NM	16679
890-1816-11	PH12	Total/NA	Solid	8015B NM	16679
890-1816-12	PH12	Total/NA	Solid	8015B NM	16679
MB 880-16679/1-A	Method Blank	Total/NA	Solid	8015B NM	16679
LCS 880-16679/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16679
LCSD 880-16679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16679
890-1816-1 MS	PH09	Total/NA	Solid	8015B NM	16679
890-1816-1 MSD	PH09	Total/NA	Solid	8015B NM	16679

#### Prep Batch: 16679

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1816-1	PH09	Total/NA	Solid	8015NM Prep	
890-1816-2	PH09	Total/NA	Solid	8015NM Prep	
890-1816-3	PH09	Total/NA	Solid	8015NM Prep	
890-1816-4	PH10	Total/NA	Solid	8015NM Prep	
890-1816-5	PH10	Total/NA	Solid	8015NM Prep	
890-1816-6	PH10	Total/NA	Solid	8015NM Prep	
890-1816-7	PH11	Total/NA	Solid	8015NM Prep	
890-1816-8	PH11	Total/NA	Solid	8015NM Prep	
890-1816-9	PH11	Total/NA	Solid	8015NM Prep	

## **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

## GC Semi VOA (Continued)

## Prep Batch: 16679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-10	PH12	Total/NA	Solid	8015NM Prep	
890-1816-11	PH12	Total/NA	Solid	8015NM Prep	
890-1816-12	PH12	Total/NA	Solid	8015NM Prep	
MB 880-16679/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16679/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1816-1 MS	PH09	Total/NA	Solid	8015NM Prep	
890-1816-1 MSD	PH09	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 17055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
390-1816-1	PH09	Total/NA	Solid	8015 NM	
890-1816-2	PH09	Total/NA	Solid	8015 NM	
890-1816-3	PH09	Total/NA	Solid	8015 NM	
890-1816-4	PH10	Total/NA	Solid	8015 NM	
390-1816-5	PH10	Total/NA	Solid	8015 NM	
390-1816-6	PH10	Total/NA	Solid	8015 NM	
390-1816-7	PH11	Total/NA	Solid	8015 NM	
390-1816-8	PH11	Total/NA	Solid	8015 NM	
390-1816-9	PH11	Total/NA	Solid	8015 NM	
890-1816-10	PH12	Total/NA	Solid	8015 NM	
390-1816-11	PH12	Total/NA	Solid	8015 NM	
890-1816-12	PH12	Total/NA	Solid	8015 NM	

### HPLC/IC

#### Leach Batch: 16761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-1	PH09	Soluble	Solid	DI Leach	
890-1816-2	PH09	Soluble	Solid	DI Leach	
890-1816-3	PH09	Soluble	Solid	DI Leach	
890-1816-4	PH10	Soluble	Solid	DI Leach	
890-1816-5	PH10	Soluble	Solid	DI Leach	
890-1816-6	PH10	Soluble	Solid	DI Leach	
890-1816-7	PH11	Soluble	Solid	DI Leach	
890-1816-8	PH11	Soluble	Solid	DI Leach	
890-1816-9	PH11	Soluble	Solid	DI Leach	
890-1816-10	PH12	Soluble	Solid	DI Leach	
890-1816-11	PH12	Soluble	Solid	DI Leach	
890-1816-12	PH12	Soluble	Solid	DI Leach	
MB 880-16761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1816-10 MS	PH12	Soluble	Solid	DI Leach	
890-1816-10 MSD	PH12	Soluble	Solid	DI Leach	

#### Analysis Batch: 16927

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1816-1	PH09	Soluble	Solid	300.0	16761
890-1816-2	PH09	Soluble	Solid	300.0	16761
890-1816-3	PH09	Soluble	Solid	300.0	16761

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Job ID: 890-1816-1

SDG: 31403360.006

## **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

HPLC/IC (Continued)

## Analysis Batch: 16927 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1816-4	PH10	Soluble	Solid	300.0	16761
890-1816-5	PH10	Soluble	Solid	300.0	16761
890-1816-6	PH10	Soluble	Solid	300.0	16761
890-1816-7	PH11	Soluble	Solid	300.0	16761
890-1816-8	PH11	Soluble	Solid	300.0	16761
890-1816-9	PH11	Soluble	Solid	300.0	16761
890-1816-10	PH12	Soluble	Solid	300.0	16761
890-1816-11	PH12	Soluble	Solid	300.0	16761
890-1816-12	PH12	Soluble	Solid	300.0	16761
MB 880-16761/1-A	Method Blank	Soluble	Solid	300.0	16761
LCS 880-16761/2-A	Lab Control Sample	Soluble	Solid	300.0	16761
LCSD 880-16761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16761
890-1816-10 MS	PH12	Soluble	Solid	300.0	16761
890-1816-10 MSD	PH12	Soluble	Solid	300.0	16761

Job ID: 890-1816-1 SDG: 31403360.006

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## Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

## **Client Sample ID: PH09** Date Collected: 01/10/22 13:16

Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16655	01/13/22 07:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16697	01/13/22 10:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/12/22 21:46	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 00:21	SC	XEN MID

## **Client Sample ID: PH09**

## Date Collected: 01/10/22 13:20

Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16655	01/13/22 07:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16697	01/13/22 11:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/12/22 22:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 00:28	SC	XEN MID

## **Client Sample ID: PH09**

#### Date Collected: 01/10/22 13:24 Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16655	01/13/22 07:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16697	01/13/22 11:37	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/12/22 23:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 00:35	SC	XEN MID

#### **Client Sample ID: PH10** Date Collected: 01/10/22 13:40 Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16655	01/13/22 07:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16697	01/13/22 11:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID

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Job ID: 890-1816-1 SDG: 31403360.006

# Lab Sample ID: 890-1816-1

Lab Sample ID: 890-1816-2

Lab Sample ID: 890-1816-3

Lab Sample ID: 890-1816-4

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

## Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

#### **Client Sample ID: PH10** Date Collected: 01/10/22 13:40

Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/12/22 23:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		1			16927	01/16/22 00:42	SC	XEN MID

#### **Client Sample ID: PH10** Date Collected: 01/10/22 13:45

#### Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 16:04	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/12/22 23:53	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 01:04	SC	XEN MID

#### **Client Sample ID: PH10**

Date Collected: 01/10/22 13:49 Date Received: 01/11/22 09:19

Batch Batch Dil Initial Final Batch Prepared Method Ргер Туре Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.96 g 5 mL 16731 01/13/22 11:00 KL XEN MID Total/NA 8021B 5 mL 5 mL 16809 01/14/22 16:24 KL XEN MID Analysis 1 Total/NA Total BTEX Analysis 1 17056 01/17/22 14:41 AJ XEN MID Total/NA Analysis 8015 NM 17055 01/17/22 14:06 AJ XEN MID 1 01/12/22 14:31 Total/NA Prep 8015NM Prep 10.00 g 10 mL 16679 DM XEN MID Total/NA Analysis 8015B NM 16627 01/13/22 00:14 A.I XEN MID 1 Soluble Leach DI Leach 5.03 g 50 mL 16761 01/13/22 12:05 СН XEN MID Soluble Analysis 300.0 10 16927 01/16/22 01:11 SC XEN MID

#### **Client Sample ID: PH11** Date Collected: 01/10/22 14:03

Date	Received:	01/11/22	09:19
_			

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 16:45	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/13/22 00:34	AJ	XEN MID

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Matrix: Solid

Job ID: 890-1816-1 SDG: 31403360.006

## Lab Sample ID: 890-1816-4 Matrix: Solid

Lab Sample ID: 890-1816-5

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Lab Sample ID: 890-1816-6

Lab Sample ID: 890-1816-7

Matrix: Solid

Matrix: Solid

## Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

### **Client Sample ID: PH11** Date Collected: 01/10/22 14:03

Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 01:18	SC	XEN MID

## **Client Sample ID: PH11**

#### Date Collected: 01/10/22 14:10 Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 17:05	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/13/22 00:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/16/22 01:25	SC	XEN MID

#### **Client Sample ID: PH11** Date Collected: 01/10/22 14:13 Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 17:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/13/22 01:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		10			16927	01/16/22 01:32	SC	XEN MID

#### **Client Sample ID: PH12** Date Collected: 01/10/22 14:30 Date Received: 01/11/22 09:19

#### Lab Sample ID: 890-1816-10 Matrix: Solid

Lab Sample ID: 890-1816-9

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 17:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/13/22 01:34	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		1			16927	01/16/22 01:39	SC	XEN MID

**Eurofins Carlsbad** 

Job ID: 890-1816-1

# SDG: 31403360.006

## Lab Sample ID: 890-1816-7 Matrix: Solid

Lab Sample ID: 890-1816-8 Matrix: Solid 9 Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

Method

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Prepared

or Analyzed

01/13/22 11:00

01/14/22 18:06

01/17/22 14:41

01/17/22 14:06

01/12/22 14:31

01/13/22 02:15

01/13/22 12:05

01/16/22 02:00

Initial

Amount

5.02 g

5 mL

10.01 g

4.97 g

Final

Amount

5 mL

5 mL

10 mL

50 mL

Batch

16731

16809

17056

17055

16679

16627

16761

16927

Number

Dil

1

1

1

1

5

Factor

Run

Client: WSP USA Inc. Project/Site: RDX 17-6

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

#### **Client Sample ID: PH12** Date Collected: 01/10/22 14:34 Date Received: 01/11/22 09:19

## Lab Sample ID: 890-1816-11

Analyst

KL

KL

AJ

AJ

DM

AJ

СН

SC

Matrix: Solid

Lab

XEN MID

Page 284 of 481

#### Lab Sample ID: 890-1816-12 Matrix: Solid

#### **Client Sample ID: PH12** Date Collected: 01/10/22 14:40

Date Received: 01/11/22 09:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	16731	01/13/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16809	01/14/22 18:27	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:41	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16627	01/13/22 02:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16761	01/13/22 12:05	СН	XEN MID
Soluble	Analysis	300.0		5			16927	01/17/22 15:59	SC	XEN MID

#### Laboratory References:

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

**Eurofins Carlsbad** 

Released to Imaging: 8/28/2024 3t46921 PMM

Client: WSP USA Inc. Project/Site: RDX 17-6

Laboratory: Eurofins Midland

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

thority	Pr	rogram	Identification Number	Expiration Date
as	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for w
the agency does not o				
the agency does not o Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

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10

Job ID: 890-1816-1

SDG: 31403360.006

## **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1816-1 SDG: 31403360.006

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

Client: WSP USA Inc. Project/Site: RDX 17-6

Job	ID:	890	-18	16-1	

SDG: 31403360.006

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1816-1	PH09	Solid	01/10/22 13:16	01/11/22 09:19	1
890-1816-2	PH09	Solid	01/10/22 13:20	01/11/22 09:19	2
890-1816-3	PH09	Solid	01/10/22 13:24	01/11/22 09:19	4
890-1816-4	PH10	Solid	01/10/22 13:40	01/11/22 09:19	1
890-1816-5	PH10	Solid	01/10/22 13:45	01/11/22 09:19	2
890-1816-6	PH10	Solid	01/10/22 13:49	01/11/22 09:19	4
890-1816-7	PH11	Solid	01/10/22 14:03	01/11/22 09:19	1
890-1816-8	PH11	Solid	01/10/22 14:10	01/11/22 09:19	2
890-1816-9	PH11	Solid	01/10/22 14:13	01/11/22 09:19	4
890-1816-10	PH12	Solid	01/10/22 14:30	01/11/22 09:19	1
890-1816-11	PH12	Solid	01/10/22 14:34	01/11/22 09:19	2
890-1816-12	PH12	Solid	01/10/22 14:40	01/11/22 09:19	4

.

					Cha	IN OT	Chain of Custody	Work Order No:	der No:
			Houston,	TX (281) 240-42	200 Dallas,T	X (214) 902	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334 Midland TX (1432-704-5440) EL Bast TX (91-51585-3443 Lubbock TX (806)794-1296	0) 509-3334 1794-1296	
		Hobb	s,NM (575-392-	-7550) Phoenix,	AZ (480-355	-0900) Atla	Hobbs, NM (575-392-7550), Phoenix AZ (480-355-0900) Atlanta, GA (770-449-8800), Tampa, FL (813-620-2000)	mpa,FL (813-620-2000) www.xenco.com	<u>o.com</u> Page 1 of 4
Project Manager: Joseph Hernandez	ernandez			Bill to: (if different)	ent) Jim I	Jim Raley			nents
Company Name: WSP				Company Name		WPX Energy		Program: UST/PST PRP Brownfields	Brownfields RRC Superfund
	3300 North A Street			Address:	5315	5315 Buena vista Dr.	ta Dr.	State of Project:	]
te ZIP:	TX 79705			City, State ZIP		Carlsbad, NM 88220	8220	Reporting:Level II	ŁŖ
Phone 281-702-2329	2329		Email	Anna.Byers@wsp.com	Dwsp.com	ŀ		Deliverables: EDD	ADaPT Other:
Project Name: RDX 17-6			Tur	Turn Around			ANALYS	ANALYSIS REQUEST	Work Order Notes
Project Number: 31403360.006	).006		Routine	ine 🗹					CC 1061137001
P.O. Number: NRM2019548894	)548894		Rush						AFE
Sampler's Name: Gilbert Moreno	breno		Due Date:	Date:					API
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	5				
Temperature (°C): 1 - 2	C.1/2		Thermometer ID	D	iner				
Received Intact:	Yes No	S IN	WWL Q	140		8021			
	No	Tota	Total Containers:	1		PA 0	e (EP		lab, if received by 4:30pm
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Numbo	BTEX (	Chlorid		Sample Comments
60SS	s	1.10.22	13;16	-	1 ×	×	×		
SS09	S	1.10.22	13:20	2	2 ×	×	×		
SS09	s	1.10.22	13:24	4	ω ×	×	×		
SS10	S	1.10.22	13:40		4 X	×	×		
SS10	s	1.10.22	13:45	2	5 ×	×	×		
SS10	s	1.10.22	13:49	4	6 ×	×	×		
SS11	s	1.10.22	14:03	-	7 X	×	×		
SS11	S	1.10.22	14:10	2	8 ×	×	×		
SS11	s	1.10.22	14:13	4	9 ×	×	×		
SS12	s	1.10.22	14:30		10 X	×	×		
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: Metal(s) to be an	ω	8RCRA 13PPM TCLP / SPLP 6	RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA		As Ba As Ba	B Cd Ca Cr Co Cd Cr Co Cu Pb	Cu Fe Pb Mg Mn Mo Ni K Se Ag S Mn Mo Ni Se Ag Ti U	SiO2 Na Sr TI Sn U V Zn 1631/245.1/7470 / 7471 : Hg
Notice: Signature of this document and of service. Xenco will be liable only fo of Xenco. A minimum charge of \$75.00	relinquishment o the cost of samp will be applied to	f samples consi les and shall no each project ar	titutes a valid pu tassume any rei nd a charge of \$5	rrchase order fror sponsibility for a 5 for each sample	n client comp ny losses or e submitted to	any to Xence expenses inco Xenco, but r	, its affiliates and subcontrac urred by the client if such los ot analyzed. These terms wil	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	
Relinquished by: (Signature)	(e)	Received	Received by: (Signature)	ıre)	Dat	Date/Time	Relinquished t	by: (Signature) Received by: (Signature)	Signature) Date/Time
		IN Cu	P		1.11.22	200			
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Received by OCD: 7/19/2024/8:47:332AM1

Released to Imaging: 8/28/2024 3:46:21 PM

1/17/2022

Page 288 of 481
Revised Date 051418 Rev. 2018.1		0, 7, 1						(e	σω
Date/ I me	e) Received by: (Signature)	Relinquished by: (Signature)	Date/Time		ed by (Signature)	Received by	(Signature)		Relinquished by:
	less previously negotiated.		ed to Xenco, but not an	r each sample submit	ct and a charge of \$5 fc	to each projec	\$75.00 will be applied	nimum charge of	of Xenco. A mi
	standard terms and conditions rcumstances beyond the control	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	company to Xenco, its a	ase order from client	onstitutes a valid purcl	t of samples o	nt and relinquishmen	re of this docume	Notice: Signatu
Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Hg	Mn Mo Ni K Se Ag SiO2 Ag TI U	I Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	Al Sb As Ba Be E A Sb As Ba Be C	Texas 11 A 010: 8RCRA	8RCRA 13PPM TCLP / SPLP 6	nalyzed	Total 200.7 / 6010     200.8 / 6020:       Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s) and	Total 2 Circle I
						T			
			× × ×	4 2	2 14:40	1.10.22	s	SS12	
			×	2 1	2 14:34	1.10.22	s	SS12	
Sample Comments			TPH (E BTEX ( Chlorid	Depth Numb	Time Sampled	X Date Sampled	ion Matrix	Sample Identification	Sam
iab, if received by 4.3upril			(EPA	er o	Total Containers:		Yes No N/A	ody Seals:	Sample Custody Seals:
TAT starts the day recevied by the	TATS		0=8	0.2	Correction Factor:		No.	dy Seals:	Cooler Custody Seals:
			021)	onta	5		Yes No	act:	Received Intact:
				iner	Ibermometer ID			(°C):	Temperature (°C):
				Yes No	Wet Ice:	k: Yes No	Temp Blank:	SAMPLE RECEIPT	SAMPLE
	API				Due Date:		Gilbert Moreno		Sampler's Name:
	AFE				Rush:		NRM2019548894		P.O. Number:
1061137001	00 1			2	Routine		31403360.006		Project Number:
Work Order Notes		ANALYSIS REQUEST		Turn Around	Turn		17-6	e: RDX 17-6	Project Name:
Other:	Deliverables: EDD ADaPT (		com,	Anna.Byers@wsp.com	Email A		281-702-2329	281-7	Phone:
<del>r</del> ével IV			Carlsbad, NM 88220	City, State ZIP	0		Midland, TX 79705		City, State ZIP:
			5315 Buena vista Dr.	Address	Ac		3300 North A Street		Address:
RkC Superfund	PRP Brownfields		WPX Energy	Company Name.	0			me: WSP	Company Name:
נ	Work Order Comments		Jim Raley	to: (if different)	Bill		Joseph Hernandez	Manager: Josep	Project Man
Page 2 of 2	www.xenco.com	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	llas,TX (214) 902-030 L Paso,TX (915)585-3 2-355-0900) Atlanta,C	(281) 240-4200 Da X (432-704-5440) E 50) Phoenix,AZ (48	Houston,TY Midland,T obbs,NM (575-392-75	F		LABORATORIES	X
	Work Order No:	ustodv	Chain of Custody	ဂ				<b>)</b>	
			14	11 12 13	9 10	7 8	5 6		1 2



14

Job Number: 890-1816-1 SDG Number: 31403360.006 List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1816 List Number: 1

Creator: Clifton, Cloe

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-1816-1 SDG Number: 31403360.006

List Source: Eurofins Midland

List Creation: 01/12/22 12:10 PM

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1816 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-1811-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

#### For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 1/14/2022 2:22:15 PM

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

LINKS Review your project results through Total Access Have a Question? Ask The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3546:21 PMM

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Receipt Checklists	24
-	

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	Definitions/Glossary		
Client: WSP US Project/Site: RE		Job ID: 890-1811-1 SDG: 31403360.006	2
Qualifiers			3
GC VOA Qualifier	Qualifier Description		4
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA Qualifier	Qualifier Description		5
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		8
U	Indicates the analyte was analyzed for but not detected.		
Glossary			9
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)		12
Dil Fac	Dilution Factor		13
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 MDL	Minimum Detectable Concentration (Radiochemistry) 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

Job ID: 890-1811-1

#### SDG: 31403360.006

#### Job ID: 890-1811-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1811-1

#### Receipt

The samples were received on 1/7/2022 4:35 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 3.2°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 for the following samples were outside control limits: PH01 (890-1811-1), PH01 (890-1811-2), PH02 (890-1811-3), PH02 (890-1811-4), PH03 (890-1811-5), PH03 (890-1811-6), (880-10005-A-48-D), (880-10005-A-48-E MS) and (880-10005-A-48-F MSD). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-16629 and analytical batch 880-16695 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:	WSP	USA	Inc.
Projec	t/Site:	RDX	17-6

#### **Client Sampl**

### SDG: 31403360.006

Job ID: 890-1811-1

lient Sample ID: PH01 ate Collected: 01/07/22 10:00 ate Received: 01/07/22 16:35							Lab Sar	nple ID: 890- Matri	1811-' ix: Solid
ample Depth: 12									
Method: 8021B - Volatile Organic	-	GC) Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Benzene	<0.00200		0.00200		mg/Kg		01/11/22 07:30	01/11/22 14:08	
Toluene	< 0.00200		0.00200		mg/Kg		01/11/22 07:30	01/11/22 14:08	
Ethylbenzene	< 0.00200		0.00200		mg/Kg		01/11/22 07:30	01/11/22 14:08	
m-Xylene & p-Xylene	< 0.00399		0.00399		mg/Kg		01/11/22 07:30	01/11/22 14:08	
o-Xylene	<0.00200		0.00200		mg/Kg		01/11/22 07:30	01/11/22 14:08	
Xylenes, Total	<0.00399		0.00399		mg/Kg		01/11/22 07:30	01/11/22 14:08	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	123		70 - 130				01/11/22 07:30	01/11/22 14:08	
1,4-Difluorobenzene (Surr)	101		70 - 130				01/11/22 07:30	01/11/22 14:08	
Method: Total BTEX - Total BTEX	Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/12/22 13:10	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0		mg/Kg			01/12/22 14:00	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/12/22 02:24	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/12/22 02:24	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/12/22 02:24	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	61	S1-	70 - 130				01/11/22 13:47	01/12/22 02:24	
o-Terphenyl	64	S1-	70 - 130				01/11/22 13:47	01/12/22 02:24	
Method: 300.0 - Anions, Ion Chro	• • •					_	<b>.</b> .		<b></b> -
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	14800		99.0		mg/Kg			01/13/22 22:06	2
lient Sample ID: PH01							Lab Sar	nple ID: 890-	
ate Collected: 01/07/22 10:50								Matri	x: Soli

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/11/22 07:30	01/11/22 14:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130				01/11/22 07:30	01/11/22 14:28	1

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Released to Imaging: 8/28/2024 3046921 PMM

#### **Client Sample Results**

Job ID: 890-1811-1 SDG: 31403360.006

## Lab Sample ID: 890-1811-2

Matrix: Solid

5

Date Collected: 01/07/22 10:50 Date Received: 01/07/22 16:35

**Client Sample ID: PH01** 

Sample Depth: 22

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130				01/11/22 07:30	01/11/22 14:28	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			01/12/22 13:10	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			01/12/22 14:00	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (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		01/11/22 13:47	01/12/22 02:47	
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		01/11/22 13:47	01/12/22 02:47	
C10-C28)					0 0				
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/22 13:47	01/12/22 02:47	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	61	S1-	70 - 130				01/11/22 13:47	01/12/22 02:47	
o-Terphenyl	65	S1-	70 - 130				01/11/22 13:47	01/12/22 02:47	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12900	F1	99.2		mg/Kg			01/13/22 22:13	20
lient Sample ID: PH02							Lab Sar	nple ID: 890-	1811-3
ate Collected: 01/07/22 11:55								Matri	x: Solic
ate Received: 01/07/22 16:35									
ample Depth: 6									
Method: 8021B - Volatile Organic	: Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	11	0.00199		ma/Ka		01/11/22 07:30	01/11/22 16:19	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/11/22 07:30	01/11/22 16:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				01/11/22 07:30	01/11/22 16:19	1
1,4-Difluorobenzene (Surr)	96		70 - 130				01/11/22 07:30	01/11/22 16:19	1
_ Method: Total BTEX - Total B⊺	EX Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/12/22 13:10	1
– Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/12/22 14:00	1

#### **Client Sample Results**

Job ID: 890-1811-1
SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1811-3

Lab Sample ID: 890-1811-4

#### **Client Sample ID: PH02**

Date Collected: 01/07/22 11:55 Date Received: 01/07/22 16:35

Client: WSP USA Inc. Project/Site: RDX 17-6

	e Organics (DI	RO) (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		01/11/22 13:47	01/12/22 03:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/12/22 03:11	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/12/22 03:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
-Chlorooctane	71		70 - 130				01/11/22 13:47	01/12/22 03:11	1
p-Terphenyl	77		70 - 130				01/11/22 13:47	01/12/22 03:11	1

#### Analyte uy⊿ Chloride 8430 50.0 mg/Kg 01/13/22 22:34 10

#### **Client Sample ID: PH02**

#### Date Collected: 01/07/22 13:16 Date Received: 01/07/22 16:35

#### Sample Depth: 22

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/11/22 07:30	01/11/22 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				01/11/22 07:30	01/11/22 16:39	1
1,4-Difluorobenzene (Surr)	97		70 - 130				01/11/22 07:30	01/11/22 16:39	1
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/12/22 13:10	1
•	- · ·								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
Analyte Total TPH	e Organics (D	Qualifier U RO) (GC)	49.9	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/12/22 14:00	Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Rang	e Organics (D	Qualifier U				D	Prepared Prepared	-	
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	e Organics (D	Qualifier U RO) (GC) Qualifier	49.9		mg/Kg		<u>.</u>	01/12/22 14:00	1
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D Result	Qualifier U RO) (GC) Qualifier U	49.9 		mg/Kg Unit		Prepared	01/12/22 14:00 Analyzed	1 Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D Result Result <49.9	Qualifier U RO) (GC) Qualifier U U	49.9 		mg/Kg Unit mg/Kg		Prepared 01/11/22 13:47	01/12/22 14:00 Analyzed 01/12/22 03:34	1 <b>Dil Fac</b> 1
C10-C28)	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U	49.9 <b>RL</b> 49.9 49.9		mg/Kg Unit mg/Kg mg/Kg		Prepared 01/11/22 13:47 01/11/22 13:47	01/12/22 14:00 Analyzed 01/12/22 03:34 01/12/22 03:34	1 Dil Fac 1

01/12/22 03:34

01/11/22 13:47

Matrix: Solid

5

o-Terphenyl

70 - 130

62 S1-

1

		Clien	nt Sample R	Results	;				
Client: WSP USA Inc.								Job ID: 890	-1811-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: PH02							Lab Sar	nple ID: 890-	1811-4
Date Collected: 01/07/22 13:16									x: Solid
Date Received: 01/07/22 16:35									
Sample Depth: 22									
Method: 300.0 - Anions, Ion Chr Analyte		Soluble Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6070		49.8		mg/Kg			01/13/22 22:41	10
Client Sample ID: PH03							Lah Sar	nple ID: 890-	1811-5
Date Collected: 01/07/22 13:55							Eus our		x: Solid
Date Received: 01/07/22 15:55								Watri	x. 3011u
Sample Depth: 6									
Method: 8021B - Volatile Organi	c Compounds (	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/11/22 07:30	01/11/22 17:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				01/11/22 07:30	01/11/22 17:00	1
1,4-Difluorobenzene (Surr)	105		70 - 130				01/11/22 07:30	01/11/22 17:00	1
Method: Total BTEX - Total BTE	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/12/22 13:10	1
– Method: 8015 NM - Diesel Range	e Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/12/22 14:00	1
– Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/11/22 13:47	01/12/22 03:58	1
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		01/11/22 13:47	01/12/22 03:58	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/11/22 13:47	01/12/22 03:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane		S1-	70 - 130				01/11/22 13:47	01/12/22 03:58	1
o-Terphenyl		S1-	70 - 130				01/11/22 13:47	01/12/22 03:58	1
_ Method: 300.0 - Anions, Ion Chr	omatography	Soluble							
methou. Juu.u - Alliolis, Ioli Chr		Soluple							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U

<0.00201 U

<0.00201 U

<0.00402 U

<0.00201 U

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

01/11/22 07:30

01/11/22 07:30

01/11/22 07:30

01/11/22 07:30

01/11/22 07:30

RL

0.00201

0.00201

0.00201

0.00402

0.00201

Dil Fac

1

1

1

1

1

Job ID: 890-1811-1 SDG: 31403360.006

#### **Client Sample ID: PH03**

Date Collected: 01/07/22 14:48 Date Received: 01/07/22 16:35

Sample Depth: 22

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Lab Sample ID: 890-1811-6 Matrix: Solid

Analyzed 01/11/22 17:20

01/11/22 17:20

01/11/22 17:20

01/11/22 17:20

01/11/22 17:20

5

Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/11/22 07:30	01/11/22 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				01/11/22 07:30	01/11/22 17:20	1
1,4-Difluorobenzene (Surr)	87		70 - 130				01/11/22 07:30	01/11/22 17:20	1
Method: Total BTEX - Total BTEX	(Calculation								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/12/22 13:10	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
· · · · · · · · · · · · · · · · · · ·	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result <49.9		<u></u> 49.9	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/12/22 14:00	Dil Fac 1
Analyte Total TPH	<49.9	U		MDL		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Rang	<49.9 ge Organics (D	U				<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<49.9 ge Organics (D	U RO) (GC) Qualifier	49.9		mg/Kg			01/12/22 14:00	1
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.9 ge Organics (DI Result	U RO) (GC) Qualifier U	49.9 		mg/Kg Unit		Prepared	01/12/22 14:00 Analyzed	1
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	e Organics (Di Result <49.9	U RO) (GC) Qualifier U	49.9 RL 49.9		mg/Kg Unit mg/Kg		Prepared 01/11/22 13:47	01/12/22 14:00 Analyzed 01/12/22 04:45	1
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 ge Organics (DI Result <49.9 <49.9	U RO) (GC) Qualifier U U	49.9 RL 49.9 49.9		mg/Kg Unit mg/Kg mg/Kg		Prepared 01/11/22 13:47 01/11/22 13:47	01/12/22 14:00 Analyzed 01/12/22 04:45 01/12/22 04:45	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	e Organics (D) Result <49.9 <49.9 <49.9 <49.9 <49.9 <49.9	U RO) (GC) Qualifier U U	49.9 <b>RL</b> 49.9 49.9 49.9		mg/Kg Unit mg/Kg mg/Kg		Prepared 01/11/22 13:47 01/11/22 13:47 01/11/22 13:47	01/12/22 14:00 Analyzed 01/12/22 04:45 01/12/22 04:45 01/12/22 04:45	1 Dil Fac 1 1 1

	Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	920		25.0		mg/Kg			01/13/22 23:09	5

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-1808-A-1-A MS	Matrix Spike	113	97		
890-1808-A-1-B MSD	Matrix Spike Duplicate	114	99		
890-1811-1	PH01	123	101		
890-1811-2	PH01	123	98		
890-1811-3	PH02	111	96		
890-1811-4	PH02	115	97		
890-1811-5	PH03	114	105		
890-1811-6	PH03	114	87		
LCS 880-16375/1-A	Lab Control Sample	106	102		
LCSD 880-16375/2-A	Lab Control Sample Dup	100	95		
MB 880-16375/5-A	Method Blank	122	104		
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

1CO1	OTPH1
	UT III
(70-130)	(70-130)
65 S1-	61 S1-
67 S1-	64 S1-
61 S1-	64 S1-
61 S1-	65 S1-
71	77
59 S1-	62 S1-
59 S1-	62 S1-
62 S1-	66 S1-
94	92
97	93
71	76
	67 S1- 61 S1- 61 S1- 71 59 S1- 59 S1- 62 S1- 94 97

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Job ID: 890-1811-1
SDG: 31403360.006

Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc.

Project/Site: RDX 17-6

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid	75/5-A								Client Sa	mple ID: Me Prep Typ		
Analysis Batch: 16473										Prep B		
		МВ					_	_	-			
Analyte		Qualifier	RL		MDL Uni	-			repared	Analyzed		Dil Fa
Benzene	<0.00200		0.00200		mg	-			1/22 07:30	01/11/22 10:		
Toluene	<0.00200		0.00200		mg	′Kg		01/1	1/22 07:30	01/11/22 10:	56	
Ethylbenzene	<0.00200	U	0.00200		mg	′Kg		01/1	1/22 07:30	01/11/22 10:	56	
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg	′Kg		01/1	1/22 07:30	01/11/22 10:	56	
o-Xylene	<0.00200	U	0.00200		mg	′Kg		01/1	1/22 07:30	01/11/22 10:	56	
Xylenes, Total	<0.00400	U	0.00400		mg	′Kg		01/1	1/22 07:30	01/11/22 10:	56	
		МВ						_				
Surrogate	%Recovery		Limits						repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)	122		70 - 130						1/22 07:30	01/11/22 10:		
1,4-Difluorobenzene (Surr)	104		70 - 130					01/1	1/22 07:30	01/11/22 10:	56	
Lab Sample ID: LCS 880-163	375/1-A						С	lient	Sample	ID: Lab Con		
Matrix: Solid										Prep Typ		
Analysis Batch: 16473										Prep B	atch:	1637
			Spike	LCS	LCS					%Rec.		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.08315		mg/Kg			83	70 - 130		
Toluene			0.100	0.08870		mg/Kg			89	70 - 130		
Ethylbenzene			0.100	0.09339		mg/Kg			93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1861		mg/Kg			93	70 - 130		
o-Xylene			0.100	0.08889		mg/Kg			89	70 - 130		
	LCS LCS	6										
Surrogate	%Recovery Qua	alifier	Limits									
4-Bromofluorobenzene (Surr)	106		70 - 130									
Diomondoi obomzonio (Oum)			70 - 130									
	102		70 - 130 70 - 130									
1,4-Difluorobenzene (Surr)						с	lient	Sam	ple ID: L	ab Control S	amp	le Du
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1						с	lient	Sam	iple ID: L	ab Control S Prep Typ		
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid						с	lient	Sam	ple ID: L	Prep Typ	e: To	otal/N
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid				LCSD	LCSD	с	lient	Sam	ple ID: L		e: To	otal/N 1637
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473			70 - 130			C Unit	lient	Sam	ple ID: La	Prep Typ Prep B	e: To	otal/N 1637 RF
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte			70 - 130 Spike Added	Result	LCSD Qualifier	Unit	lient		%Rec	Prep Typ Prep B %Rec. Limits	e: To atch:	otal/N 1637 RF Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene			70 - 130 Spike Added 0.100	<b>Result</b> 0.07953		<mark>Unit</mark> mg/Kg	lient		% <b>Rec</b>	Prep Typ Prep B %Rec. Limits 70 - 130	e: To atch:	otal/N 1637 RF Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene			70 - 130 Spike Added 0.100 0.100	<b>Result</b> 0.07953 0.08523		<mark>Unit</mark> mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130	RPD 4 4	otal/N 1637 RF Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene			70 - 130 Spike Added 0.100 0.100 0.100	<b>Result</b> 0.07953 0.08523 0.08496		<mark>Unit</mark> mg/Kg mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85 85	Prep Typ           Prep B           %Rec.           Limits           70 - 130           70 - 130           70 - 130	e: To atch: RPD 4 4 9	otal/N 1637 RF Lin
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene			Spike           Added           0.100           0.100           0.100           0.200	<b>Result</b> 0.07953 0.08523		Unit mg/Kg mg/Kg mg/Kg mg/Kg			<b>%Rec</b> 80 85	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130	RPD 4 4	otal/N 1637 RP Lim 3 3 3
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	6375/2-A		70 - 130 Spike Added 0.100 0.100 0.100	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		<mark>Unit</mark> mg/Kg mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85 85 86	Prep Typ           Prep B           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	RPD 4 9 8	otal/N 1637 RP Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	6375/2-A		Spike           Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85 85 86	Prep Typ           Prep B           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	RPD 4 9 8	otal/N 1637 RP Lim 3 3 3
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene Surrogate	6375/2-A		70 - 130 Spike Added 0.100 0.100 0.200 0.100 Limits	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85 85 86	Prep Typ           Prep B           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	RPD 4 9 8	otal/N 1637 RP Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	6375/2-A		Spike           Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		<b>%Rec</b> 80 85 85 86	Prep Typ           Prep B           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	RPD 4 9 8	otal/N 1637 RP Lim
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	6375/2-A 		70 - 130         Spike         Added         0.100         0.100         0.100         0.200         0.100         Limits         70 - 130	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		%Rec 80 85 85 86 84	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	<b>RPD</b> 4 4 9 8 6	otal/N 1637 RF Lin
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A-	6375/2-A 		70 - 130         Spike         Added         0.100         0.100         0.100         0.200         0.100         Limits         70 - 130	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		%Rec 80 85 85 86 84	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	RPD 4 4 9 8 6	0tal/N 1637 RF Lin 3 3 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid	6375/2-A 		70 - 130         Spike         Added         0.100         0.100         0.100         0.200         0.100         Limits         70 - 130	<b>Result</b> 0.07953 0.08523 0.08496 0.1720		Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		%Rec 80 85 85 86 84	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	RPD 4 4 9 8 6	s Spik
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid	6375/2-A 	alifier	70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         D.200         0.100         0.200         0.100	Result 0.07953 0.08523 0.08496 0.1720 0.08408	Qualifier	Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		%Rec 80 85 85 86 84	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 8 Sample ID: M Prep Typ Prep B	RPD 4 4 9 8 6	s Spik
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid Analysis Batch: 16473	6375/2-A 	nlifier	70 - 130         Spike         Added         0.100         0.100         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         Spike	Result 0.07953 0.08523 0.08496 0.1720 0.08408 MS	Qualifier	Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient	<u>D</u>	%Rec 80 85 85 86 84 Client S	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 190 70 - 190 7	RPD 4 4 9 8 6	Spik
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid Analysis Batch: 16473 Analyte	6375/2-A	nlifier	70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         Description         Description         Spike         Added	Result           0.07953           0.08523           0.08408           0.1720           0.08408	Qualifier	Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient		%Rec 80 85 85 86 84 Client S	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130	RPD 4 4 9 8 6	Spik
1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid Analysis Batch: 16473 Analyte	6375/2-A	nlifier	70 - 130         Spike         Added         0.100         0.100         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.0996	Result           0.07953           0.08523           0.08408           0.1720           0.08408           MS           Result           0.07055	Qualifier	Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient	<u>D</u>	%Rec         80           80         85           85         86           84         84           Client S           %Rec         71	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 %Rec. Limits 70 - 130	RPD 4 4 9 8 6	s Spik
1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1 Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1808-A- Matrix: Solid Analysis Batch: 16473 Analyte Benzene Toluene	6375/2-A	nlifier	70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.200         0.100         0.200         0.100         0.200         0.100         0.200         0.100         Description         Description         Spike         Added	Result           0.07953           0.08523           0.08408           0.1720           0.08408	Qualifier	Unit mg/Kg mg/Kg mg/Kg mg/Kg	lient	<u>D</u>	%Rec 80 85 85 86 84 Client S	Prep Typ Prep B %Rec. Limits 70 - 130 70 - 130	RPD 4 4 9 8 6	s Spik

Lab Sample ID: 890-1808-A-1-A MS

MS MS

0.08297

0.1604

0.07909

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0996

0.199

0.0996

Limits

70 - 130

70 - 130

70 - 130

Analysis Batch: 16473

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00202

<0.00403 U

<0.00202 U

113

97

99

%Recovery

Result Qualifier

U

MS MS

Qualifier

Prep Type: Total/NA

Prep Batch: 16375

**Client Sample ID: Matrix Spike** 

SDG: 31403360.006

# 7

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

%Rec.

Limits

70 - 130

70 - 130

70 - 130

%Rec

83

81

79

D

#### Matrix: Solid Analysis Batch: 16473

Lab Sample ID: 890-1808-A-1-B MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 16473									Prep	Batch:	16375
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	< 0.00202	U	0.100	0.07696		mg/Kg		77	70 - 130	9	35
Toluene	<0.00202	U	0.100	0.08435		mg/Kg		84	70 - 130	4	35
Ethylbenzene	<0.00202	U	0.100	0.08810		mg/Kg		88	70 - 130	6	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1699		mg/Kg		85	70 _ 130	6	35
o-Xylene	<0.00202	U	0.100	0.08222		mg/Kg		82	70 - 130	4	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								

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

Lab Sample ID: MB 880-16541/1- Matrix: Solid	Α						Client Sa	mple ID: Metho Prep Type: 1	Fotal/NA
Analysis Batch: 16483	МВ	МВ						Prep Batch	1. 10341
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/11/22 22:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/11/22 22:28	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/11/22 13:47	01/11/22 22:28	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130				01/11/22 13:47	01/11/22 22:28	1
o-Terphenyl	76		70 - 130				01/11/22 13:47	01/11/22 22:28	1

#### Lab Sample ID: LCS 880-16541/2-A Matrix: Solid Analysis Batch: 16483 LCS LCS Snike

	Opike	200	200				/artec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	782.0		mg/Kg		78	70 _ 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	894.0		mg/Kg		89	70 - 130	
C10-C28)								

**Eurofins Carlsbad** 

Prep Type: Total/NA

Prep Batch: 16541

Client Sample ID: Lab Control Sample

%Rec

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Lab Sample ID: LCS 880-16541/2-A

#### **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6

Matrix: Solid

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

Prep Type: Total/NA

Prep Batch: 16541

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

# 7

<b>Client Sample</b>	ID:	Matrix	Spike
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**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Type:	Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	92		70 - 130

Matrix: Solid Analysis Batch: 16483								Type: To Batch:	
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	840.1		mg/Kg		84	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	979.9		mg/Kg		98	70 - 130	9	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 880-10005-A- Matrix: Solid Analysis Batch: 16483	-48-E MS							Client	Prep	): Matrix Spike Type: Total/NA D Batch: 16541
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	728.1		mg/Kg		71	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	996	786.7		mg/Kg		79	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	65	S1-	70 _ 130
o-Terphenyl	61	S1-	70 - 130

Lab Sample ID: 880-10005-A-48-F MSD
Matrix: Solid
Analysis Batch: 16483

Analysis Batch: 16483									Prep	Batch:	16541
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	744.4		mg/Kg		73	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	826.5		mg/Kg		83	70 _ 130	5	20
	MSD	MSD									

	MSD MSD						
Surrogate	%Recovery	Qualifier	Limits				
1-Chlorooctane	67	S1-	70 - 130				
o-Terphenyl	64	S1-	70 - 130				

Client: WSP USA Inc.

#### **QC Sample Results**

Job ID: 890-1811-1 SDG: 31403360.006

Project/Site: RDX 17-6 Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16629/1-A											CI	ient S	ample ID:	Method	Blank
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 16695															
		MB	MB												
Analyte			Qualifier		RL		MDL	Unit		D	Prep	ared	Analyz	zed	Dil Fac
Chloride	•	<5.00	U		5.00			mg/Kg					01/13/22	19:23	1
Lab Sample ID: LCS 880-16629/2-A										Clie	ent Sa	ample	ID: Lab C	ontrol S	ample
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 16695															
				Spike		LCS	LCS						%Rec.		
Analyte				Added		Result	Quali	ifier	Unit	!	D %	Rec	Limits		
Chloride				250		272.1			mg/Kg			109	90 _ 110		
Lab Sample ID: LCSD 880-16629/3	-A								Cli	ent Sa	ampl	e ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 16695															
				Spike		LCSD	LCSE	D					%Rec.		RPD
Analyte				Added		Result	Quali	ifier	Unit		D_%	Rec	Limits	RPD	Limit
Chloride				250		272.5			mg/Kg			109	90 _ 110	0	20
Lab Sample ID: 890-1811-2 MS													Client Sa	mple ID:	PH01
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 16695															
	Sample	Sam	ple	Spike		MS	MS						%Rec.		
Analyte	Result	Qual	ifier	Added		Result	Quali	ifier	Unit	I	D %	Rec	Limits		
Chloride	12900	F1		4960		18380	F1		mg/Kg			112	90 _ 110		
Lab Sample ID: 890-1811-2 MSD													Client Sa	mple ID:	PH01
														Type: S	
Matrix: Solid															
Matrix: Solid															
	Sample	Sam	ple	Spike		MSD	MSD						%Rec.		RPD
Matrix: Solid	Sample Result			Spike Added		MSD Result			Unit	I	D %	Rec	%Rec. Limits	RPD	RPD Limit

#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

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Job ID: 890-1811-1 SDG: 31403360.006

#### **GC VOA**

#### Prep Batch: 16375

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1811-1	PH01	Total/NA	Solid	5035	
890-1811-2	PH01	Total/NA	Solid	5035	
890-1811-3	PH02	Total/NA	Solid	5035	
890-1811-4	PH02	Total/NA	Solid	5035	
890-1811-5	PH03	Total/NA	Solid	5035	
890-1811-6	PH03	Total/NA	Solid	5035	
MB 880-16375/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16375/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16375/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1808-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-1808-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 16473

IVID 000-103/5/5-A	Method Blank	TOTAI/INA	Solid	5035		
LCS 880-16375/1-A	Lab Control Sample	Total/NA	Solid	5035		8
LCSD 880-16375/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-1808-A-1-A MS	Matrix Spike	Total/NA	Solid	5035		9
890-1808-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 16473						10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	11
890-1811-1	PH01	Total/NA	Solid	8021B	16375	
890-1811-2	PH01	Total/NA	Solid	8021B	16375	12
890-1811-3	PH02	Total/NA	Solid	8021B	16375	
890-1811-4	PH02	Total/NA	Solid	8021B	16375	40
890-1811-5	PH03	Total/NA	Solid	8021B	16375	13
890-1811-6	PH03	Total/NA	Solid	8021B	16375	
MB 880-16375/5-A	Method Blank	Total/NA	Solid	8021B	16375	14
LCS 880-16375/1-A	Lab Control Sample	Total/NA	Solid	8021B	16375	
LCSD 880-16375/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16375	
890-1808-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	16375	
890-1808-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16375	

#### Analysis Batch: 16668

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1811-1	PH01	Total/NA	Solid	Total BTEX	
890-1811-2	PH01	Total/NA	Solid	Total BTEX	
890-1811-3	PH02	Total/NA	Solid	Total BTEX	
890-1811-4	PH02	Total/NA	Solid	Total BTEX	
890-1811-5	PH03	Total/NA	Solid	Total BTEX	
890-1811-6	PH03	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 16483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1811-1	PH01	Total/NA	Solid	8015B NM	16541
890-1811-2	PH01	Total/NA	Solid	8015B NM	16541
890-1811-3	PH02	Total/NA	Solid	8015B NM	16541
890-1811-4	PH02	Total/NA	Solid	8015B NM	16541
890-1811-5	PH03	Total/NA	Solid	8015B NM	16541
890-1811-6	PH03	Total/NA	Solid	8015B NM	16541
MB 880-16541/1-A	Method Blank	Total/NA	Solid	8015B NM	16541
LCS 880-16541/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16541
LCSD 880-16541/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16541
880-10005-A-48-E MS	Matrix Spike	Total/NA	Solid	8015B NM	16541
880-10005-A-48-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16541

Eurofins Carlsbad

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#### **QC** Association Summary

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1811-1 SDG: 31403360.006

GC Semi VOA

#### Prep Batch: 16541

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-1811-1	PH01	Total/NA	Solid	8015NM Prep	
890-1811-2	PH01	Total/NA	Solid	8015NM Prep	
390-1811-3	PH02	Total/NA	Solid	8015NM Prep	
390-1811-4	PH02	Total/NA	Solid	8015NM Prep	
390-1811-5	PH03	Total/NA	Solid	8015NM Prep	
890-1811-6	PH03	Total/NA	Solid	8015NM Prep	
MB 880-16541/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
_CS 880-16541/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
_CSD 880-16541/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
380-10005-A-48-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
380-10005-A-48-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1811-1	PH01	Total/NA	Solid	8015 NM	
890-1811-2	PH01	Total/NA	Solid	8015 NM	
890-1811-3	PH02	Total/NA	Solid	8015 NM	
890-1811-4	PH02	Total/NA	Solid	8015 NM	
890-1811-5	PH03	Total/NA	Solid	8015 NM	
890-1811-6	PH03	Total/NA	Solid	8015 NM	
-					

#### HPLC/IC

#### Leach Batch: 16629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1811-1	PH01	Soluble	Solid	DI Leach	
890-1811-2	PH01	Soluble	Solid	DI Leach	
890-1811-3	PH02	Soluble	Solid	DI Leach	
890-1811-4	PH02	Soluble	Solid	DI Leach	
890-1811-5	PH03	Soluble	Solid	DI Leach	
890-1811-6	PH03	Soluble	Solid	DI Leach	
MB 880-16629/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16629/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16629/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1811-2 MS	PH01	Soluble	Solid	DI Leach	
890-1811-2 MSD	PH01	Soluble	Solid	DI Leach	

#### Analysis Batch: 16695

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1811-1	PH01	Soluble	Solid	300.0	16629
890-1811-2	PH01	Soluble	Solid	300.0	16629
890-1811-3	PH02	Soluble	Solid	300.0	16629
890-1811-4	PH02	Soluble	Solid	300.0	16629
890-1811-5	PH03	Soluble	Solid	300.0	16629
890-1811-6	PH03	Soluble	Solid	300.0	16629
MB 880-16629/1-A	Method Blank	Soluble	Solid	300.0	16629
LCS 880-16629/2-A	Lab Control Sample	Soluble	Solid	300.0	16629
LCSD 880-16629/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16629
890-1811-2 MS	PH01	Soluble	Solid	300.0	16629
890-1811-2 MSD	PH01	Soluble	Solid	300.0	16629

#### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

#### **Client Sample ID: PH01** Date Collected: 01/07/22 10:00

Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 14:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 02:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		20			16695	01/13/22 22:06	СН	XEN MID

#### **Client Sample ID: PH01**

Date Collected: 01/07/22 10:50 Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 14:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 02:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		20			16695	01/13/22 22:13	СН	XEN MID

#### **Client Sample ID: PH02**

#### Date Collected: 01/07/22 11:55 Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 16:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 03:11	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		10			16695	01/13/22 22:34	СН	XEN MID

#### **Client Sample ID: PH02** Date Collected: 01/07/22 13:16 Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 16:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID

**Eurofins Carlsbad** 

#### Job ID: 890-1811-1 SDG: 31403360.006

#### Lab Sample ID: 890-1811-1 Matrix: Solid

Lab Sample ID: 890-1811-3

Lab Sample ID: 890-1811-4

Matrix: Solid

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Lab Sample ID: 890-1811-2 Matrix: Solid

Matrix: Solid

#### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

#### **Client Sample ID: PH02**

Date Collected: 01/07/22 13:16 Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 03:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		10			16695	01/13/22 22:41	СН	XEN MID

#### **Client Sample ID: PH03**

#### Date Collected: 01/07/22 13:55 Date Received: 01/07/22 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 17:00	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 03:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		20			16695	01/13/22 23:02	CH	XEN MID

#### **Client Sample ID: PH03**

Date Collected: 01/07/22 14:48 Date Received: 01/07/22 16:35 Lab Sample ID: 890-1811-6 Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	16375	01/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16473	01/11/22 17:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/12/22 14:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16541	01/11/22 13:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16483	01/12/22 04:45	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16629	01/12/22 10:44	СН	XEN MID
Soluble	Analysis	300.0		5			16695	01/13/22 23:09	СН	XEN MID

#### Laboratory References:

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

**Eurofins Carlsbad** 

Job ID: 890-1811-1

Matrix: Solid

Matrix: Solid

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SDG: 31403360.006

Lab Sample ID: 890-1811-4

Lab Sample ID: 890-1811-5

Accreditation/Certification Summary

Client: WSP USA Inc. Project/Site: RDX 17-6

Laboratory: Eurofins Midland

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

thority	P	rogram	Identification Number	Expiration Date
as	N	IELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, b	out the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for w
the agency does not o				
• ,	ffer certification. Prep Method	Matrix	Analyte	
the agency does not o		Matrix Solid		

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Job ID: 890-1811-1

SDG: 31403360.006

#### **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1811-1 SDG: 31403360.006

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN 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:

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

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Client: WSP USA Inc. Project/Site: RDX 17-6

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-1811-1	PH01	Solid	01/07/22 10:00	01/07/22 16:35	12	-
90-1811-2	PH01	Solid	01/07/22 10:50	01/07/22 16:35	22	
90-1811-3	PH02	Solid	01/07/22 11:55	01/07/22 16:35	6	
90-1811-4	PH02	Solid	01/07/22 13:16	01/07/22 16:35	22	
90-1811-5	PH03	Solid	01/07/22 13:55	01/07/22 16:35	6	
90-1811-6	PH03	Solid	01/07/22 14:48	01/07/22 16:35	22	
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SiO2 Na Sr Ti Sn U V Zn 1631/245.1/7470 / 7471 : Hg	Mg Mn Mo Ni K Se Ag Si Ag Ti U	Cd Ca Cr Co Cu Fe Pb N Co Cu Pb Mn Mo Ni Se A	Al Sb As Ba Be B Sb As Ba Be Cd Cr	8RCRA 13PPM Texas 11 TCLP / SPLP 6010: 8RCRA S		<b>200.8 / 6020:</b> Metal(s) to be analyz	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	о <b>т</b> о
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Sample Comments			TPH BIE Chlo	Depth Numb	Date Time Sampled Sampled	Matrix	Sample Identification	Lab ID
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TAT starts the day recevied by the lab, if	- Current		ef	P	Correction Factor:	6		Co
Zn Acetate+ NaOH: Zn		890-1811 Chain of Custody	A 4		Thermometer ID	CYS NO	Received Intact:	
HCL: HL			302	Yes No	Yes No Wet Ice:	Temp Blank:	SAMPLE RECEIPT	SAMPI
H2S04: H2			18		Quote #:	22m20195-18894	PO # 22000	
HNO3: HN			)	ate:	NO	P		San
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Work Order Comments	Work		JIM PALEY	Bill to: (if different)	HERNANDER	JOSEPH HERN	Project Manager: Jos	Pro
<u>a.com</u> Page <u>l</u> of	-5440 389-6701 <u>www.xenco.com</u>	06) 794-1296 Craslbad, NM (432) 704-5440 20-2000 West Palm Beach, FL (561) 689-6701	Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Cr Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West P	4-5440 EL Paso,TX (915 900 Atlanta,GA (770) 44	Midland,TX (432) 70 Phoenix,AZ (480) <u>355-</u> 0			
		n Antonio,TX (210) 509-3334	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (2	n,TX (281) 240-4200 Dε	Houst		XII	
Work Order No:	Work O	tody	Chain of Custody	C				



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Vor 06/08/2021		and Other Remarks:		Cooler Temperature(s) °C	r Tempe	Coole						Custody Seals Intact: Custody Seal No.:
company	Date/Time:				Received by:	Recei		Company			Date/Time:	Relinquished by:
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Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For	mples are retain	e assessed if san ] Disposal By Lab	fee may b t	le Disposal ( A fi Return To Client	Dispo. eturn T		Sa					Possible Hazard Identification
Jer chain-of-custody. If the laboratory does not currently accreditation status should be brought to Eurofins South	rwarded under chain- changes to accredita	ample shipment is for will be provided. Any	r instructions	y or othe	aborator 1 Central	on out s Central I ns South	South C Eurofir	ditation complia to the Eurofins complicance to	inalyte & accred shipped back ttesting to said	ip of method, a mples must be in of Custody at	ral places the ownerst being analyzed, the si return the signed Cha	Note: Since laboratory accreditations are subject to change, Eurofins South Central places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody, maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins South Central laboratory or other instructions will be provided. Any changes to accreditation status i Central attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins South Central.
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	1		×	×	×	×	-	Solid		13:16 Mountain	1/7/22	PH02 (890-1811-4)
	-		×	×	×	×	-	Solid		11:55 Mountain	1/7/22	PH02 (890-1811-3)
			×	××	×	×		Solid		10:50 Mountain	1/7/22	PH01 (890-1811-2)
	1		×	×	×	×		Solid		10:00 Mountain	1/7/22	PH01 (890-1811-1)
							X	ion Code:	Preservation Code:	X	X	
Special Instructions/Note:	Total Numb		Total_BTEX_C	8015MOD_Ca	8015MOD_NM	300_ORGFM_	Field Filtered Perform MS/	Matrix (W=water, S=solid, O=waste/oll, BT=Tissue, A=Alr)	Sample Type (C=comp, G=grab)	Sample Time	Sample Date	Sample Identification - Client ID (Lab ID)
	er of c		GCV		-	_					SSOW#:	
L - EDA Z - other (specify)	ontain										Project #: 88000203	Project Name: RDX 17-6
J - DI Water V - MCAA K - EDTA W - pH 4-5	ers				rep Fu						WO #	Email:
٩					II TPH	ide	0)				PO #	Phone: 432-704-5440(Tel)
E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2SO3												State, Zip: TX, 79701
										iys):	TAT Requested (days):	City: Midland
Ś		Requested	lysis	Ana				-		d:	Due Date Requested: 1/13/2022	Address: 1211 W. Florida Ave,
990-1811-1			ote):	ELAP - Texas	Require	Accreditations Requ						Company: Eurofins Xenco
Page 1 of 1		New Mexico	3	E-Mail: jessica.kramer@eurofinset.com	eurofir	imer@	ca.kra	jessic			Phone:	Client Contact: Shipping/Receiving
890-578.1		Chatto of Origin:				Jessica	ner, Je	Kramer,			Sampler:	Client Information (Sub Contract Lab)
COC No:	No(s):	Carrier Tracking No(s):					Ş	lah DM-			2	Phone: 575-988-3199 Fax: 575-988-3199
America						ord	eco	tody R	Chain of Custody Record	Chain o	•	1089 N Canal St. Carlsbad, NM 88220
🦄 eurofins												Eurofins Xenco, Carlsbad

Ver: 06/08/2021

Released to Imaging: 8/28/2024 3:46:921 PMM

14

Job Number: 890-1811-1 SDG Number: 31403360.006

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1811 List Number: 1 Creator: Clifton, Cloe

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	

N/A

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-1811-1 SDG Number: 31403360.006

List Source: Eurofins Midland

List Creation: 01/11/22 12:18 PM

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1811 List Number: 2 Creator: Lowe, Katie

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-1822-1

Laboratory Sample Delivery Group: 31403360.006 Client Project/Site: RDX 17-6

#### For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 1/18/2022 3:34:35 PM

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

LINKS Review your project results through Total Access Have a Question? Ask The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 8/28/2024 3546:21 PMM

•

Laboratory Job ID: 890-1822-1 SDG: 31403360.006

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2

Client: WSP USA Inc. Project/Site: RDX 17-6 Page 319 of 481

3

5

Job ID: 890-1822-1
SDG: 31403360.006

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.
S1-	Surrogate recovery exceeds control limits, low biased.

#### Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected. GC Semi VOA Qualifier **Qualifier Description** Surrogate recovery exceeds control limits, low biased. Indicates the analyte was analyzed for but not detected. HPLC/IC **Qualifier Description** MS and/or MSD recovery exceeds control limits. Indicates the analyte was analyzed for but not detected.

#### Glossary

S1+

S1-U

F1

υ

Qualifier

U

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	4
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	

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1822-1 SDG: 31403360.006

#### Job ID: 890-1822-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1822-1

#### Receipt

The samples were received on 1/12/2022 10:39 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: (MB 880-16781/5-A) and (MB 880-16834/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16834 and analytical batch 880-16936 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: The laboratory control sample (LCS) for preparation batch 880-16834 and analytical batch 880-16936 recovered outside control limits for the following analytes: Toluene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: PH06 (890-1822-5), PH06 (890-1822-6), PH07 (890-1822-7), PH07 (890-1822-8), PH08 (890-1822-9), (890-1824-A-1-E MS) and (890-1824-A-1-F MSD). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Method: Total BTEX - Total BTEX Calculation

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

Result Qualifier

Qualifier

Qualifier

U

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00400 U

<0.00200 U

<0.00400 U

94

101

Result

< 0.00400

%Recovery

#### **Client Sample Results**

RL

0.00200

0.00200

0.00200

0.00400

0.00200

0.00400

Limits

70 - 130

70 - 130

RL

RL

0.00400

MDL

MDL Unit

MDL Unit

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

D

D

Prepared

01/17/22 07:15

01/17/22 07:15

01/17/22 07:15

01/17/22 07:15

01/17/22 07:15

01/17/22 07:15

Prepared

01/17/22 07:15

01/17/22 07:15

Prepared

Prepared

Client: WSP	USA Inc.
Project/Site:	RDX 17-6

Sample Depth: 0.5

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Analyte

Total BTEX

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### **Client Sample ID: PH04**

Date Collected: 01/10/22 14:00 Date Received: 01/12/22 10:39

SDG: 31403360.006

Analyzed

01/17/22 12:35

01/17/22 12:35

01/17/22 12:35

01/17/22 12:35

01/17/22 12:35

01/17/22 12:35

Analyzed

01/17/22 12:35

01/17/22 12:35

Analyzed

01/17/22 14:46

Analyzed

Dil Fac

Matrix: Solid

#### Lab Sample ID: 890-1822-1

Job ID: 890-1822-1

Matrix: Solid

822-1	3
Solid	
	4
	5
Dil Fac	
1	6
1	
1	7
1	
1	8
1	
Dil Fac	9
1 1	10
Dil Fac	11
1	12
	13

D) (GC) uualifier	RL 50.0 50.0 50.0	MDL	Unit mg/Kg mg/Kg mg/Kg	<u> </u>	Prepared 01/13/22 13:55 01/13/22 13:55 01/13/22 13:55	Analyzed 01/15/22 03:07 01/15/22 03:07 01/15/22 03:07	Dil Fac
	50.0	MDL	mg/Kg	<u>D</u>	01/13/22 13:55	01/15/22 03:07	Dil Fac
I	50.0		mg/Kg		01/13/22 13:55	01/15/22 03:07	1
							1
I	50.0		mg/Kg		01/13/22 13:55	01/15/22 03:07	
						01/10/22 00:01	1
ualifier	Limits				Prepared	Analyzed	Dil Fac
	70 - 130				01/13/22 13:55	01/15/22 03:07	1
	70 - 130				01/13/22 13:55	01/15/22 03:07	1
oluble							
ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	4.96		mg/Kg			01/18/22 09:20	1
		70 - 130 Dluble ualifier RL	70 - 130 Dluble ualifier RL MDL	70 - 130 Diuble ualifier RL MDL Unit	70 - 130 Diuble ualifier RL MDL Unit D	70 - 130         01/13/22 13:55           Duble         MDL         Unit         D         Prepared           4.96         MDL         mg/Kg         D         Prepared	70 - 130         01/13/22 13:55         01/15/22 03:07           Duble

#### Date Collected: 01/10/22 14:02 Date Received: 01/12/22 10:39 Sample Depth: 1

Method: 8021B - Volatile Orga	nic Compounds (	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/17/22 07:15	01/17/22 13:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130				01/17/22 07:15	01/17/22 13:02	1

#### **Client Sample Results**

Job ID: 890-1822-1 SDG: 31403360.006

### Lab Sample ID: 890-1822-2

Matrix: Solid

5

Date Collected: 01/10/22 14:02 Date Received: 01/12/22 10:39

**Client Sample ID: PH04** 

Sample	Depth: 1

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130				01/17/22 07:15	01/17/22 13:02	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			01/17/22 14:46	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (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		01/13/22 13:55	01/15/22 03:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 03:27	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 03:27	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	74		70 - 130				01/13/22 13:55	01/15/22 03:27	
o-Terphenyl	78		70 - 130				01/13/22 13:55	01/15/22 03:27	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	361		4.99		mg/Kg			01/18/22 09:28	1
Client Sample ID: PH05							Lab San	nple ID: 890-	1822-3
Date Collected: 01/10/22 14:30								Matri	x: Solid
ate Received: 01/12/22 10:39									
Sample Depth: 0.5									

er Limits 70 - 130 70 - 130		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 <b>Prepared</b> 01/17/22 07:15	01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 <b>Analyzed</b> 01/17/22 13:30	1 1 1 1 1 1 1 <b>Dill Fac</b>
0.00199 0.00398 0.00199 0.00398 er Limits 70 - 130		mg/Kg mg/Kg mg/Kg		01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 <b>Prepared</b>	01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 Analyzed	1 1 1 1 <b>Dil Fac</b>
0.00398 0.00199 0.00398 er <u>Limits</u> 70 - 130		mg/Kg mg/Kg		01/17/22 07:15 01/17/22 07:15 01/17/22 07:15 <b>Prepared</b>	01/17/22 13:30 01/17/22 13:30 01/17/22 13:30 <b>Analyzed</b>	1 1 1 <b>Dil Fac</b>
0.00199 0.00398 er <u>Limits</u> 70 - 130		mg/Kg		01/17/22 07:15 01/17/22 07:15 <b>Prepared</b>	01/17/22 13:30 01/17/22 13:30 <b>Analyzed</b>	1 1 
0.00398 er <u>Limits</u> 70 - 130				01/17/22 07:15 <b>Prepared</b>	01/17/22 13:30 Analyzed	1 1 
er <u>Limits</u> 70 - 130		mg/Kg		Prepared	Analyzed	1 
70 - 130				· · ·		Dil Fac
				01/17/22 07:15	01/17/22 13:30	1
70 - 130						1
				01/17/22 07:15	01/17/22 13:30	1
er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.00398		mg/Kg			01/17/22 14:46	1
r						

Eurofins Carlsbad

01/17/22 14:15

Total TPH

49.9

mg/Kg

56.5

1

Matrix: Solid

#### **Client Sample Results**

Job ID: 890-1822-1
SDG: 31403360.006

Lab Sample ID: 890-1822-3

#### Project/Site: RDX 17-6

Client: WSP USA Inc.

#### **Client Sample ID: PH05**

Date Collected: 01/10/22 14:30 Date Received: 01/12/22 10:39

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 03:48	
Diesel Range Organics (Over C10-C28)	56.5		49.9		mg/Kg		01/13/22 13:55	01/15/22 03:48	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 03:48	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	82		70 - 130				01/13/22 13:55	01/15/22 03:48	
o-Terphenyl	88		70 - 130				01/13/22 13:55	01/15/22 03:48	

	acography .	oolabio							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	421		24.9		mg/Kg			01/18/22 09:51	5

#### **Client Sample ID: PH05**

#### Date Collected: 01/10/22 14:32

Date Received: 01/12/22 10:39

#### Sample Depth: 1

Method: 8021B - Volatile Orga									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/17/22 07:15	01/17/22 13:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				01/17/22 07:15	01/17/22 13:57	1
1,4-Difluorobenzene (Surr)	102		70 - 130				01/17/22 07:15	01/17/22 13:57	1
Method: Total BTEX - Total B	<b>TEX Calculation</b>								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Rai	nge Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	76.8		49.9		mg/Kg			01/17/22 14:15	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 04:10	1
Diesel Range Organics (Over C10-C28)	76.8		49.9		mg/Kg		01/13/22 13:55	01/15/22 04:10	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 04:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130				01/13/22 13:55	01/15/22 04:10	1
o-Terphenyl	75		70 _ 130				01/13/22 13:55	01/15/22 04:10	1

		Clien	it Sample R	lesults	;				
Client: WSP USA Inc.								Job ID: 890	)-1822-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: PH05							Lab Sar	nple ID: 890-	1822-4
Date Collected: 01/10/22 14:32								-	ix: Solid
Date Received: 01/12/22 10:39									
Sample Depth: 1									
_									
Method: 300.0 - Anions, Ion Chr						_			
Analyte Chloride	Result 195	Qualifier		MDL	Unit mg/Kg	D	Prepared	Analyzed 01/18/22 09:58	Dil Fac
_	135		21.0		ingrig				
Client Sample ID: PH06							Lab San	nple ID: 890-	
Date Collected: 01/10/22 14:45								Matri	ix: Solid
Date Received: 01/12/22 10:39									
Sample Depth: 0.5									
– Method: 8021B - Volatile Organi	c Compounds (	(GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/17/22 07:15	01/17/22 14:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				01/17/22 07:15	01/17/22 14:25	1
1,4-Difluorobenzene (Surr)	101		70 - 130				01/17/22 07:15	01/17/22 14:25	1
_ Method: Total BTEX - Total BTE	X Calculation								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397		0.00397		mg/Kg			01/17/22 14:46	1
_					0 0				
Method: 8015 NM - Diesel Range						_	_		
		Qualifier		MDL		D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 04:31	1
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 04:31	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 04:31	1
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fac
1 L'morooctane	68	S1-	70 - 130				01/13/22 13:55	01/15/22 04:31	1
1-Chlorooctane							01/13/22 13:55		1
o-Terphenyl	75		70 - 130				01/13/22 13:33	01/15/22 04:31	,
		Soluble	70 - 130				01/13/22 13.33	01/15/22 04:31	I
o-Terphenyl	omatography -	Soluble Qualifier	70 <sub>-</sub> 130	MDL	Unit	D	Prepared	01/15/22 04:31	1 Dil Fac

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#### **Client Sample Results**

Client:	WSP	USA	Inc.
Projec	t/Site:	RDX	17-6

#### **Client Sample ID: PH06**

Date Collected: 01/10/22 14:47 Date

#### Job ID: 890-1822-1 SDG: 31403360.006

# Lab Sample ID: 890-1822-6

Matrix: Solid

5

Method: 8021B - Volatile Organic	Compounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
Toluene	<0.00200	U *+ F1	0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
m-Xylene & p-Xylene	<0.00401	U F1	0.00401		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
Xylenes, Total	<0.00401	U F1	0.00401		mg/Kg		01/14/22 09:19	01/16/22 04:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130				01/14/22 09:19	01/16/22 04:31	1
1,4-Difluorobenzene (Surr)	91		70 - 130				01/14/22 09:19	01/16/22 04:31	1
Method: Total BTEX - Total BTEX	(Calculation								
Analyte		Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Range									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel Rang									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 04:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 04:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 04:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130				01/13/22 13:55	01/15/22 04:52	1
o-Terphenyl	72		70 - 130				01/13/22 13:55	01/15/22 04:52	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.03		5.00		mg/Kg			01/18/22 10:13	1
lient Sample ID: PH07							Lab San	nple ID: 890-	1822-7
ate Collected: 01/10/22 15:05								Matri	x: Solid
ate Received: 01/12/22 10:39									
ample Depth: 0.5									
Method: 8021B - Volatile Organic									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:57	1
Toluene	<0.00200		0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:57	1
Ethylbenzene	<0.00200		0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:57	
m-Xylene & p-Xylene	<0.00401		0.00401		mg/Kg		01/14/22 09:19	01/16/22 04:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 04:57	1
Vulance Total	~0.00401		0.00401				01/11/22 00:10	01/16/00 04-57	

Xylenes, Total <0.00401 U 0.00401 01/14/22 09:19 01/16/22 04:57 mg/Kg 1 Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 4-Bromofluorobenzene (Surr) 131 S1+ 70 - 130 01/14/22 09:19 01/16/22 04:57 1

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

Method: Total BTEX - Total BTEX Calculation

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

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

%Recovery Qualifier

Result Qualifier

Result Qualifier

**Result Qualifier** 

<49.9 U

<49.9 U

<49.9 U

%Recovery Qualifier

87

<0.00401 U

<49.9 U Dil Fac

Dil Fac

Dil Fac

Matrix: Solid

#### **Client Sample Results**

Limits

70 - 130

RL

RL

49.9

RL

49.9

49.9

49.9

0.00401

MDL Unit

MDL Unit

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Job ID: 890-1822-1 SDG: 31403360.006

#### **Client Sample ID: PH07**

Date Collected: 01/10/22 15:05 Date Received: 01/12/22 10:39

Sample Depth: 0.5

1,4-Difluorobenzene (Surr)

Gasoline Range Organics

**Diesel Range Organics (Over** 

Oll Range Organics (Over C28-C36)

Surrogate

Analyte

Analyte

Analyte

(GRO)-C6-C10

C10-C28)

Surrogate

Total TPH

Total BTEX

Client: WSP USA Inc.

Project/Site: RDX 17-6

Lab Sample	ID:	890-1822-7
		Matrix: Solid

Analyzed

01/16/22 04:57

Analyzed

01/17/22 14:46

Analyzed

01/17/22 14:15

Prepared

01/14/22 09:19

Prepared

Prepared

D

D

5

D	Prepared	Analyzed	Dil Fac	
	01/13/22 13:55	01/15/22 05:14	1	
	01/13/22 13:55	01/15/22 05:14	1	12
	01/13/22 13:55	01/15/22 05:14	1	13
	Prepared	Analyzed	Dil Fac	
	01/13/22 13:55	01/15/22 05:14	1	

Lab Sample ID: 890-1822-8

1-Chlorooctane	68 S1-	70 - 130				01/13/22 13:55	01/15/22 05:14	1
o-Terphenyl	74	70 - 130				01/13/22 13:55	01/15/22 05:14	1
Method: 300.0 - Anions, Ion Chron	natography - Solul	ble						
Analyte	Result Quali	fier RL	MDL	11	-	Durana		
Analyte	Result Quali	ilei KL	WIDL	Unit	D	Prepared	Analyzed	Dil Fac

Limits

#### **Client Sample ID: PH07**

Date Collected: 01/10/22 15:07 Date Received: 01/12/22 10:39 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 01/14/22 09:19 01/16/22 05:23 01/14/22 09:19 Toluene <0.00201 U\*+ 0.00201 01/16/22 05:23 mg/Kg 1 Ethylbenzene <0.00201 U 0.00201 mg/Kg 01/14/22 09:19 01/16/22 05:23 0.00402 01/14/22 09:19 01/16/22 05:23 m-Xylene & p-Xylene <0.00402 U mg/Kg 1 o-Xylene <0.00201 U 0.00201 mg/Kg 01/14/22 09:19 01/16/22 05:23 Xylenes, Total <0.00402 U 0.00402 mg/Kg 01/14/22 09:19 01/16/22 05:23 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analvzed 70 - 130 4-Bromofluorobenzene (Surr) 01/14/22 09:19 01/16/22 05:23 93 1 1,4-Difluorobenzene (Surr) 98 70 - 130 01/14/22 09:19 01/16/22 05:23 1 Method: Total BTEX - Total BTEX Calculation Analvte RL MDL D Dil Fac Result Qualifier Unit Prepared Analvzed Total BTEX <0.00402 Ū 0.00402 01/17/22 14:46 mg/Kg 1 Method: 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac <50.0 U Total TPH 50.0 01/17/22 14:15 mg/Kg 1

#### **Client Sample Results**

Job ID: 890-1822-1
SDG: 31403360.006

Matrix: Solid

Lab Sample ID: 890-1822-8

Lab Sample ID: 890-1822-9

Matrix: Solid

# Project/Site: RDX 17-6

Client: WSP USA Inc.

#### Client Sample ID: PH07 Date Collected: 01/10/22 15:07

Date Received: 01/12/22 10:39

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 05:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 05:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/22 13:55	01/15/22 05:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130				01/13/22 13:55	01/15/22 05:35	1
o-Terphenyl	73		70 - 130				01/13/22 13:55	01/15/22 05:35	1

Analyte		Qualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.01 U	U F1 5.01	mg/Kg			01/18/22 10:28	1

#### **Client Sample ID: PH08**

#### Date Collected: 01/10/22 15:10

Date Received: 01/12/22 10:39

#### Sample Depth: 0.5

Method: 8021B - Volatile Orga	nic Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/14/22 09:19	01/16/22 05:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130				01/14/22 09:19	01/16/22 05:50	1
1,4-Difluorobenzene (Surr)	101		70 - 130				01/14/22 09:19	01/16/22 05:50	1
Analyte Total BTEX	Result <0.00400	Qualifier	RL	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Rar			0.00400		iiig/itg			01/1//22 14.40	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/17/22 14:15	1
- Method: 8015B NM - Diesel Ra	ange Organics (D	RO) (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		01/13/22 13:55	01/15/22 05:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/13/22 13:55	01/15/22 05:56	1

Oll Range Organics (Over C28-C36) <49.9 U 49.9 01/13/22 13:55 01/15/22 05:56 mg/Kg 1 %Recovery Qualifier Limits Analyzed Dil Fac Surrogate Prepared 01/13/22 13:55 1-Chlorooctane 70 - 130 01/15/22 05:56 67 S1-1 o-Terphenyl 69 S1-70 - 130 01/13/22 13:55 01/15/22 05:56 1

		Clien	t Sample F	Results	;				
Client: WSP USA Inc.			-					Job ID: 890	)-1822-1
Project/Site: RDX 17-6								SDG: 31403	360.006
Client Sample ID: PH08							Lab Sar	nple ID: 890-	1822-9
Date Collected: 01/10/22 15:10									ix: Solid
Date Received: 01/12/22 10:39									
Sample Depth: 0.5									
Method: 300.0 - Anions, Ion Chr						_	<u> </u>		
Analyte Chloride		Qualifier		MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/18/22 10:51	Dil Fac
Client Sample ID: PH08							Lab Sam	ple ID: 890-1	
Date Collected: 01/10/22 15:12 Date Received: 01/12/22 10:39 Sample Depth: 1								Matri	ix: Solid
Method: 8021B - Volatile Organi	c Compounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
o-Xylene	<0.00200		0.00200		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
Xylenes, Total	< 0.00399		0.00399		mg/Kg		01/14/22 09:19	01/16/22 06:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				01/14/22 09:19	01/16/22 06:17	1
1,4-Difluorobenzene (Surr)	96		70 - 130				01/14/22 09:19	01/16/22 06:17	1
Method: Total BTEX - Total BTE		<b>.</b>				_			
Analyte		Qualifier		MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Range	e Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte	·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/13/22 13:59	01/14/22 09:04	1
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		01/13/22 13:59	01/14/22 09:04	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/22 13:59	01/14/22 09:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130				01/13/22 13:59	01/14/22 09:04	1
o-Terphenyl	85		70 - 130				01/13/22 13:59	01/14/22 09:04	1
 Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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Released to Imaging: 8/28/2024 3846921 PMM

Client: WSP USA Inc. Project/Site: RDX 17-6

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1822-1	PH04	94	101	
890-1822-2	PH04	83	90	
890-1822-3	PH05	99	103	
890-1822-4	PH05	97	102	
890-1822-5	PH06	99	101	
890-1822-6	PH06	90	91	
890-1822-6 MS	PH06	86	102	
890-1822-6 MSD	PH06	88	105	
890-1822-7	PH07	131 S1+	87	
890-1822-8	PH07	93	98	
890-1822-9	PH08	92	101	
890-1822-10	PH08	88	96	
LCS 880-16834/1-A	Lab Control Sample	97	109	
LCS 880-16869/1-A	Lab Control Sample	86	103	
LCSD 880-16834/2-A	Lab Control Sample Dup	99	114	
LCSD 880-16869/2-A	Lab Control Sample Dup	87	103	
MB 880-16781/5-A	Method Blank	62 S1-	91	
MB 880-16834/5-A	Method Blank	62 S1-	93	
MB 880-16869/5-A	Method Blank	70	92	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matri	x: So	lid

			Percent Surrogate Recovery (Acceptance Limits)
	BFB1	DFBZ1	
Client Sample ID			
Matrix Spike			
Matrix Spike Duplicate			
nzene (Surr)			
	Matrix Spike Matrix Spike Duplicate	Client Sample ID Matrix Spike Matrix Spike Duplicate	Client Sample ID Matrix Spike Matrix Spike Duplicate

DFBZ = 1,4-Difluorobenzene (Surr)

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

Percent Surrogate Recovery (Acceptance Limits)
--

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1822-1	PH04	72	76
890-1822-2	PH04	74	78
890-1822-3	PH05	82	88
890-1822-4	PH05	70	75
890-1822-5	PH06	68 S1-	75
890-1822-6	PH06	67 S1-	72
890-1822-7	PH07	68 S1-	74
890-1822-8	PH07	70	73

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc.

#### **Surrogate Summary**

Job ID: 890-1822-1
SDG: 31403360.006

#### Project/Site: RDX 17-6 Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued) Matrix: Solid

Prep Type: Total/NA

		1CO1	OTPH1	Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		-
890-1822-9	PH08		69 S1-	·	5
890-1822-10	PH08	73	85		C
890-1824-A-1-E MS	Matrix Spike	67 S1-	62 S1-		6
890-1824-A-1-F MSD	Matrix Spike Duplicate	66 S1-	62 S1-		
LCS 880-16787/2-A	Lab Control Sample	93	87		
LCSD 880-16787/3-A	Lab Control Sample Dup	90	86		
MB 880-16787/1-A	Method Blank	74	85		8
Surrogate Legend					9
1CO = 1-Chlorooctane					
OTPH = o-Terphenyl					
					13
					14

#### **QC Sample Results**

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid	5-A										Prep Type: *	d Blank
Analysis Batch: 16936											Prep Batcl	
Analysis Batch. 10930	MB	мв									Ртер Басс	1. 10/0
Analyte		Qualifier	RL	г	мпі	Unit		D	P	repared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200			mg/Kg		_		4/22 12:00	01/15/22 14:19	
Toluene	<0.00200		0.00200			mg/Kg				4/22 12:00	01/15/22 14:19	
Ethylbenzene	<0.00200		0.00200			mg/Kg				4/22 12:00	01/15/22 14:19	
m-Xylene & p-Xylene	<0.00200		0.00200			mg/Kg				4/22 12:00	01/15/22 14:19	
o-Xylene	<0.00400		0.00400			mg/Kg				4/22 12:00	01/15/22 14:19	
Xylenes, Total	<0.00400	U	0.00400			mg/Kg			01/14	4/22 12:00	01/15/22 14:19	
	MB	MB										
Surrogate	%Recovery	Qualifier	Limits						P	repared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130						01/1	4/22 12:00	01/15/22 14:19	
1,4-Difluorobenzene (Surr)	91		70 - 130						01/1	4/22 12:00	01/15/22 14:19	
-												
Lab Sample ID: MB 880-16834/5	5-A									<b>Client Sa</b>	mple ID: Metho	d Blank
Matrix: Solid											Prep Type:	Fotal/NA
Analysis Batch: 16936											Prep Batcl	n: 16834
	МВ	MB										
Analyte	Result	Qualifier	RL	I	MDL	Unit		D	P	repared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200			mg/Kg			01/1	4/22 09:19	01/16/22 04:04	
Toluene	<0.00200	U	0.00200			mg/Kg			01/1	4/22 09:19	01/16/22 04:04	
Ethylbenzene	<0.00200	U	0.00200			mg/Kg			01/1	4/22 09:19	01/16/22 04:04	
m-Xylene & p-Xylene	<0.00400	U	0.00400			mg/Kg			01/1	4/22 09:19	01/16/22 04:04	
o-Xylene	<0.00200	U	0.00200			mg/Kg			01/1	4/22 09:19	01/16/22 04:04	
Xylenes, Total	<0.00400		0.00400			mg/Kg				4/22 09:19	01/16/22 04:04	
	MB	MB										
Surrogate	%Recovery	Qualifier	Limits						P	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130						01/1	4/22 09:19	01/16/22 04:04	
1,4-Difluorobenzene (Surr)	93		70 - 130						01/1	4/22 09:19	01/16/22 04:04	1
-												
								C	lient	Sample I	D: Lab Control	Sample
Lab Sample ID: LCS 880-16834/	/1-A											
Matrix: Solid	/1-A										Prep Type:	Fotal/NA
-	/1 <b>-A</b>										Prep Type: <sup>-</sup> Prep Batcl	Fotal/NA
Matrix: Solid	/1 <b>-A</b>		Spike	LCS	LCS							Fotal/NA
Matrix: Solid	/1-A		Spike Added	LCS Result		ifier l	Jnit		D	%Rec	Prep Batcl	Fotal/NA
Matrix: Solid Analysis Batch: 16936	/1-A		•				<b>Jnit</b> ng/Kg		<u>D</u>	% <b>Rec</b>	Prep Batcl %Rec.	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte	/1-A 		Added	Result	Qual	r			<u>D</u>		Prep Batcl %Rec. Limits	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene	/1-A 		Added	<b>Result</b> 0.1275	Qual	r r	ng/Kg		<u>D</u>	127	Prep Batcl %Rec. Limits 70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene	/1-A 		Added           0.100           0.100	<b>Result</b> 0.1275 0.1351	Qual	r r r	ng/Kg ng/Kg		<u> </u>	127 135	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene	/ <b>1-A</b>		Added 0.100 0.100 0.100	<b>Result</b> 0.1275 0.1351 0.1146	Qual	r r r r	ng/Kg ng/Kg ng/Kg		<u>D</u>	127 135 115	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene			Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg		<u> </u>	127 135 115 119	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	LCS LCS		Added 0.100 0.100 0.100 0.200 0.100	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg		<u>D</u>	127 135 115 119	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	LCS LCS %Recovery Qua		Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg		<u>D</u>	127 135 115 119	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	LCS LCS %Recovery Qua 97		Added           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg		<u>D</u>	127 135 115 119	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	LCS LCS %Recovery Qua		Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg		<u>D</u>	127 135 115 119	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	LCS LCS %Recovery Qua 97 109		Added           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg			127 135 115 119 126	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA 1: 16834
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1683	LCS LCS %Recovery Qua 97 109		Added           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg			127 135 115 119 126	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA 1: 16834
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1683 Matrix: Solid	LCS LCS %Recovery Qua 97 109		Added           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual	r r r r	ng/Kg ng/Kg ng/Kg ng/Kg			127 135 115 119 126	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA 1: 16834 
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1683	LCS LCS %Recovery Qua 97 109		Added           0.100           0.100           0.100           0.200           0.100           0.200           0.100           0.200           0.100           70 - 130           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390 0.1260	Qual	1 1 1 1 1	ng/Kg ng/Kg ng/Kg ng/Kg			127 135 115 119 126	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           Prep Type:           Prep Batcl	ple Dup Fotal/NA 
Matrix: Solid Analysis Batch: 16936 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-1683 Matrix: Solid	LCS LCS %Recovery Qua 97 109		Added           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	<b>Result</b> 0.1275 0.1351 0.1146 0.2390	Qual *+	D	ng/Kg ng/Kg ng/Kg ng/Kg			127 135 115 119 126	Prep Batcl           %Rec.           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Fotal/NA 1: 16834 

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 Job ID: 890-1822-1

 SDG: 31403360.006

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#### **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1822-1 SDG: 31403360.006

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

Lab Sample ID: LCSD 880-1683	4/2-A					Clier	nt Sam	ple ID:	Lab Contro		-
Matrix: Solid										ype: To	
Analysis Batch: 16936			<b>•</b> "							Batch:	
Awahata			Spike		LCSD	11	_	0/ D	%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.1225		mg/Kg		123	70 <sub>-</sub> 130	10	35
Ethylbenzene			0.100	0.1073		mg/Kg		107	70 - 130		35
m-Xylene & p-Xylene			0.200	0.2233		mg/Kg		112	70 - 130	7	35
o-Xylene			0.100	0.1180		mg/Kg		118	70 - 130	7	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	99		70 - 130								
1,4-Difluorobenzene (Surr)	114		70 - 130								
Lab Sample ID: 890-1822-6 MS									Client Sar	nple ID:	PH06
Matrix: Solid										ype: To	
Analysis Batch: 16936										Batch:	
	Sample	Sample	Spike	MS	MS				«Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.101	0.07676		mg/Kg		76	70 - 130		
Toluene	<0.00200	U *+ F1	0.101	0.06362	F1	mg/Kg		63	70 - 130		
Ethylbenzene	<0.00200	U F1	0.101	0.05397	F1	mg/Kg		53	70 - 130		
m-Xylene & p-Xylene	<0.00401	U F1	0.202	0.1061	F1	mg/Kg		53	70 - 130		
o-Xylene	<0.00200	U F1	0.101	0.05113	F1	mg/Kg		51	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	86		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 890-1822-6 MSI	<b>)</b>								Client Sar	nple ID:	PH06
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 16936									Prep	Batch:	16834
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.07887		mg/Kg		79	70 - 130	3	35
Toluene	<0.00200	U *+ F1	0.100	0.07217		mg/Kg		72	70 - 130	13	35
Ethylbenzene	<0.00200	U F1	0.100	0.06361	F1	mg/Kg		63	70 - 130	16	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

<0.00200 UF1

#### Lab Sample ID: MB 880-16869/5-A Matrix: Solid Analysis Batch: 16968

o-Xylene

# MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:15	01/17/22 11:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:15	01/17/22 11:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:15	01/17/22 11:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/17/22 07:15	01/17/22 11:39	1

0.100

0.06564 F1

mg/Kg

65

70 - 130

**Client Sample ID: Method Blank** 

#### Eurofins Carlsbad

25

Prep Type: Total/NA

Prep Batch: 16869

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1822-1 SDG: 31403360.006

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

Lab Sample ID: MB 880-1686	69/5-A								CI	ient Sa	mple ID:		
Matrix: Solid											Prep 1	Гуре: То	otal/NA
Analysis Batch: 16968											Prep	Batch:	16869
	М	B MB											
Analyte	Resu	It Qualifier	RL		MDL	Unit		D	Prep	ared	Analyz	ed	Dil Fac
o-Xylene	<0.0020	0 U	0.00200			mg/Kg	1	_	01/17/2	2 07:15	01/17/22	11:39	1
Xylenes, Total	<0.0040	0 U	0.00400			mg/Kg	1		01/17/2	2 07:15	01/17/22	11:39	
-													
	M	B MB											
Surrogate	%Recover	y Qualifier	Limits						Prep	ared	Analyz	zed	Dil Fac
4-Bromofluorobenzene (Surr)	7	0	70 - 130						01/17/2	2 07:15	01/17/22	11:39	
1,4-Difluorobenzene (Surr)	9	2	70 - 130						01/17/2	2 07:15	01/17/22	11:39	
Lab Sample ID: LCS 880-168	69/1-A							С	lient Sa	ample I	D: Lab Co	ontrol S	Sample
Matrix: Solid											Prep 1	Type: To	otal/N/
Analysis Batch: 16968												Batch:	
-			Spike	LCS	LCS						«Rec.		
Analyte			Added	Result	Qual	lifier	Unit		D %	6Rec	Limits		
Benzene			0.100	0.1205			mg/Kg			120	70 - 130		
Toluene			0.100	0.1091			mg/Kg			109	70 - 130		
Ethylbenzene			0.100	0.09424			mg/Kg			94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1968			mg/Kg			98	70 - 130		
o-Xylene			0.100	0.1009			mg/Kg			101	70 - 130		
o Xylono			0.100	0.1000			ing/itg			101	10-100		
	LCS LC	s											
Surrogate		CS Jalifier	Limits										
Surrogate 4-Bromofluorobenzene (Surr)			Limits 70 - 130										
	%Recovery Qu												
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	<b>%Recovery</b> Qu 86 103		70 - 130				Cli	ent	Sampl	e ID: La	ab Contro	ol Samp	le Du
4-Bromofluorobenzene (Surr)	<b>%Recovery</b> Qu 86 103		70 - 130				Cli	ent	Sampl	e ID: La	ab Contro Prep 1		-
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid	<b>%Recovery</b> Qu 86 103		70 - 130				Cli	ent	Sampl	e ID: La	Prep 1	Type: To	otal/NA
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16	<b>%Recovery</b> Qu 86 103		70 - 130	LCSD	LCS	D	Cli	ent	Sampl	e ID: La	Prep 1		otal/NA 16869
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 Spike					ent	-		Prep 1 Prep %Rec.	Type: To Batch:	otal/N/ 16869 RPI
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 Spike Added	Result			Unit	ent	-	6Rec	Prep 1 Prep	Type: To	otal/N/ 16869 RPI Limi
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 Spike Added 0.100	<b>Result</b> 0.1258			Unit mg/Kg	ent	-	6 <b>Rec</b>	Prep 1 Prep %Rec. Limits 70 - 130	Type: To Batch: RPD 4	20141/N/ 16869 RPI Limi
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 Spike Added 0.100 0.100	<b>Result</b> 0.1258 0.1142			Unit mg/Kg mg/Kg	ent	-	<b>6Rec</b> 126 114	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130	Type: To Batch: RPD 4 5	2 tal/N/ 16869 RPI Limi 33
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	<b>Result</b> 0.1258 0.1142 0.09901			Unit mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	Type: ToBatch:RPD455	2 tal/N/ 16869 RPI Limi 3 3 3 3
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99 104	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 5 5	2 16869 RPI Limi 38 38 38 38 38
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene	<b>%Recovery</b> Qu 86 103		70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	<b>Result</b> 0.1258 0.1142 0.09901			Unit mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	Type: ToBatch:RPD455	2 16869 RPI Limi 39 39 39 39 39 39 39
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<b>%Recovery</b> Qu 86 103	ualifier	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99 104	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 5 5	2 16869 RPI Limi 39 39 39 39 39 39 39
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<u>%Recovery</u> <u>Qu</u> 86 103 5869/2-A	ssD	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99 104	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 5 5	otal/NA
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene		ssD	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99 104	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 5 5	2 16869 RPI Limi 38 38 38 38 38
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate		ssD	70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100 Limits	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	-	6 <b>Rec</b> 126 114 99 104	Prep 7 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 4 5 5	2 16869 RPI Limi 38 38 38 38 38
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	<u>%Recovery</u> Qu <u>86</u> 103 5869/2-A <u>LCSD</u> LC <u>%Recovery</u> Qu 87 103	ssD	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	<u> </u>	6 <b>Rec</b> 126 114 99 104 106	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch:	20141/NA 16869 RPI Limi 39 39 39 39 39 39 39 39 39 39
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1829-A-1	<u>%Recovery</u> Qu <u>86</u> 103 5869/2-A <u>LCSD</u> LC <u>%Recovery</u> Qu 87 103	ssD	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	<u> </u>	6 <b>Rec</b> 126 114 99 104 106	Prep 7 Prep % %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch:	2 1686 RPI Limi 3 3 3 3 3 3 3 3 3 3 3 3 3
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1829-A-1 Matrix: Solid	<u>%Recovery</u> Qu <u>86</u> 103 5869/2-A <u>LCSD</u> LC <u>%Recovery</u> Qu 87 103	ssD	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	<u> </u>	6 <b>Rec</b> 126 114 99 104 106	Prep 7 Prep % %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch:	tal/NA 16869 RPI Limi 30 31 32 32 32 32 32 32 32 32 32 32
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-16 Matrix: Solid Analysis Batch: 16968 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 890-1829-A-1	<u>%Recovery</u> Qu <u>86</u> 103 5869/2-A <u>LCSD</u> LC <u>%Recovery</u> Qu 87 103	ıalifier	70 - 130         70 - 130         70 - 130         Spike         Added         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100         0.100	<b>Result</b> 0.1258 0.1142 0.09901 0.2072			Unit mg/Kg mg/Kg mg/Kg mg/Kg	ent	<u> </u>	6 <b>Rec</b> 126 114 99 104 106	Prep 7 Prep % %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch:	tal/NA 16869 RPI Limi 30 31 32 32 32 32 32 32 32 32 32 32

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6

C10-C28)

ethod: 8021B - Volatile Orgai	nic Con	npour	nds (G	iC) (Conf	tinu	ed)							
ab Sample ID: 890-1829-A-1-B MS											nt Sampla ID:	: Matrix Spike D	
ab Sample ID. 090-1029-A-1-B WS latrix: Solid	,D									Cile	nt Sample ID.	Prep Type: <sup>-</sup>	
Analysis Batch: 16968												Thep Type.	
	MSD I			,									
	Recovery	Qualifie	<u>"</u>	Limits									
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)													
r,4-Dilluoroberizerie (Surr)													
ethod: 8015B NM - Diesel Ra	inge Or	ganic	s (DR	0) (GC)									
.ab Sample ID: MB 880-16787/1-A											Client Sa	ample ID: Metho	od Blank
Matrix: Solid												Prep Type: <sup>-</sup>	Total/NA
Analysis Batch: 16815												Prep Batcl	
		MB ME	в									-	
Analyte	Re	esult Qu	ualifier		RL	1	MDL	Unit		D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<5	50.0 U		Ę	50.0			mg/Kg		_	01/13/22 13:55	01/14/22 21:18	1
GRO)-C6-C10					•								
Diesel Range Organics (Over C10-C28)	<5	50.0 U		5	50.0			mg/Kg			01/13/22 13:55	01/14/22 21:18	1
OII Range Organics (Over C28-C36)	</td <td>50.0 U</td> <td></td> <td>ţ</td> <td>50.0</td> <td></td> <td></td> <td>mg/Kg</td> <td></td> <td></td> <td>01/13/22 13:55</td> <td>01/14/22 21:18</td> <td>1</td>	50.0 U		ţ	50.0			mg/Kg			01/13/22 13:55	01/14/22 21:18	1
	-	C		-	10.0			119/119			01/10/22 10.00	01/17/22 21.15	
		MB ME											
Surrogate	%Recov		ualifier	Limits							Prepared	Analyzed	Dil Fac
1-Chlorooctane		74		70 - 13							01/13/22 13:55	01/14/22 21:18	1
p-Terphenyl		85		70 - 13	30						01/13/22 13:55	01/14/22 21:18	1
Lab Sample ID: LCS 880-16787/2-A										С	lient Sample	ID: Lab Control	Sample
Matrix: Solid												Prep Type: <sup>-</sup>	
Analysis Batch: 16815												Prep Batch	h: 16787
				Spike		LCS	LCS					%Rec.	
Analyte				Added		Result	Qual	ifier	Unit		D %Rec	Limits	
Gasoline Range Organics				1000		967.2			mg/Kg		97	70 - 130	
(GRO)-C6-C10				1000		224.0					00		
Diesel Range Organics (Over C10-C28)				1000		804.8			mg/Kg		80	70 - 130	
510-028)													
	LCS												
	Recovery	Qualifie	¥	Limits									
1-Chlorooctane	93			70 - 130									
o-Terphenyl	87			70 - 130									
Lab Sample ID: LCSD 880-16787/3-	- <b>A</b>								CI	ient	Sample ID: L	ab Control Sam	ple Dup
Matrix: Solid											•	Prep Type:	
Analysis Batch: 16815												Pren Batch	

Analysis Batch: 16815 Prep Batch: 16787 Spike LCSD LCSD %Rec. RPD Result Qualifier Analyte Added Unit D %Rec Limits RPD Limit Gasoline Range Organics 1000 945.2 mg/Kg 95 70 - 130 2 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 796.1 mg/Kg 80 70 - 130 20 1

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

#### Job ID: 890-1822-1 SDG: 31403360.006

Lab Sample ID: 890-1824-A-1-E MS

#### **QC Sample Results**

MS MS

1114

945.9

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

108

93

Spike

Added

996

996

Limits

70 <sub>-</sub> 130 70 <sub>-</sub> 130

Analysis Batch: 16815

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Sample Sample

<49.9 U

<49.9 U

MS MS

67 S1-

62 S1-

%Recovery Qualifier

Result Qualifier

Prep Type: Total/NA

Prep Batch: 16787

**Client Sample ID: Matrix Spike** 

%Rec.

Limits

70 - 130

70 - 130

Lab Sample ID: 890-1824-A-1-	F MSD						Client Sa	ample IC	D: Matrix Sp	oike Dup	olicate
Matrix: Solid									Prep 1	Type: Tot	tal/NA
Analysis Batch: 16815									Prep	Batch:	16787
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1084		mg/Kg		104	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	951.7		mg/Kg		93	70 - 130	1	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	66	S1-	70 - 130								
o-Terphenyl	62	S1-	70 - 130								

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16762/1-A Matrix: Solid										Client S	Sample ID: N Pren 1	lethod ype: S	
Analysis Batch: 16935											T Op 1	<b>J</b> po. 0	orabic
	MB	MB											
Analyte	Result	Qualifier		RL		MDL	Unit		DF	Prepared	Analyze	d	Dil Fac
Chloride	<5.00	U		5.00			mg/Kg				01/18/22 0	8:20	1
Lab Sample ID: LCS 880-16762/2-A									Clien	t Sample	e ID: Lab Co	ntrol S	ample
Matrix: Solid											Prep 1	ype: S	oluble
Analysis Batch: 16935													
			Spike		LCS	LCS					%Rec.		
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits		
Chloride			250		270.7			mg/Kg		108	90 - 110		
Lab Sample ID: LCSD 880-16762/3-A								Cli	ient Sar	nple ID:	Lab Control	Sampl	e Dup
Matrix: Solid											Prep 1	'ype: S	oluble
Analysis Batch: 16935													
			Spike		LCSD	LCS	D				%Rec.		RPD
Analyte			Added		Result	Qual	ifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		270.6			mg/Kg		108	90 - 110	0	20

### **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1822-1 SDG: 31403360.006

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1822-8 MS Matrix: Solid									Client Sar Prep	nple ID: Type: S	
Analysis Batch: 16935											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	<5.01	U F1	251	291.8	F1	mg/Kg		115	90 - 110		
Lab Sample ID: 890-1822-8 MSD									Client Sar	nple ID:	PH07
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 16935											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<5.01	U F1	251	280.1		mg/Kg		110	90 _ 110	4	20

Client: WSP USA Inc. Project/Site: RDX 17-6 Page 337 of 481

Job ID: 890-1822-1 SDG: 31403360.006

#### **GC VOA**

#### Prep Batch: 16781

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-16781/5-A	Method Blank	Total/NA	Solid	5035	
rep Batch: 16834					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-6	PH06	Total/NA	Solid	5035	
890-1822-7	PH07	Total/NA	Solid	5035	
890-1822-8	PH07	Total/NA	Solid	5035	
890-1822-9	PH08	Total/NA	Solid	5035	
890-1822-10	PH08	Total/NA	Solid	5035	
MB 880-16834/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16834/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16834/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1822-6 MS	PH06	Total/NA	Solid	5035	
890-1822-6 MSD	PH06	Total/NA	Solid	5035	
rep Batch: 16869					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	5035	
890-1822-2	PH04	Total/NA	Solid	5035	
890-1822-3	PH05	Total/NA	Solid	5035	
890-1822-4	PH05	Total/NA	Solid	5035	

#### Prep Batch: 16869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	5035	
890-1822-2	PH04	Total/NA	Solid	5035	
890-1822-3	PH05	Total/NA	Solid	5035	
890-1822-4	PH05	Total/NA	Solid	5035	
890-1822-5	PH06	Total/NA	Solid	5035	
MB 880-16869/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16869/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16869/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Analysis Batch: 16936

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-6	PH06	Total/NA	Solid	8021B	16834
890-1822-7	PH07	Total/NA	Solid	8021B	16834
890-1822-8	PH07	Total/NA	Solid	8021B	16834
890-1822-9	PH08	Total/NA	Solid	8021B	16834
890-1822-10	PH08	Total/NA	Solid	8021B	16834
MB 880-16781/5-A	Method Blank	Total/NA	Solid	8021B	16781
MB 880-16834/5-A	Method Blank	Total/NA	Solid	8021B	16834
LCS 880-16834/1-A	Lab Control Sample	Total/NA	Solid	8021B	16834
LCSD 880-16834/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16834
890-1822-6 MS	PH06	Total/NA	Solid	8021B	16834
890-1822-6 MSD	PH06	Total/NA	Solid	8021B	16834

#### Analysis Batch: 16968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	8021B	16869
890-1822-2	PH04	Total/NA	Solid	8021B	16869
890-1822-3	PH05	Total/NA	Solid	8021B	16869
890-1822-4	PH05	Total/NA	Solid	8021B	16869
890-1822-5	PH06	Total/NA	Solid	8021B	16869
MB 880-16869/5-A	Method Blank	Total/NA	Solid	8021B	16869
LCS 880-16869/1-A	Lab Control Sample	Total/NA	Solid	8021B	16869
LCSD 880-16869/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16869
890-1829-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	

Job ID: 890-1822-1 SDG: 31403360.006

#### GC VOA (Continued)

#### Analysis Batch: 16968 (Continued)

_ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1829-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	
nalysis Batch: 17056	5				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	Total BTEX	
890-1822-2	PH04	Total/NA	Solid	Total BTEX	
890-1822-3	PH05	Total/NA	Solid	Total BTEX	
890-1822-4	PH05	Total/NA	Solid	Total BTEX	
890-1822-5	PH06	Total/NA	Solid	Total BTEX	
890-1822-6	PH06	Total/NA	Solid	Total BTEX	
890-1822-7	PH07	Total/NA	Solid	Total BTEX	
890-1822-8	PH07	Total/NA	Solid	Total BTEX	
890-1822-9	PH08	Total/NA	Solid	Total BTEX	
890-1822-10	PH08	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 16702

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-1822-10	PH08	Total/NA	Solid	8015B NM	16788	

#### Prep Batch: 16787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	8015NM Prep	
890-1822-2	PH04	Total/NA	Solid	8015NM Prep	
890-1822-3	PH05	Total/NA	Solid	8015NM Prep	
890-1822-4	PH05	Total/NA	Solid	8015NM Prep	
890-1822-5	PH06	Total/NA	Solid	8015NM Prep	
890-1822-6	PH06	Total/NA	Solid	8015NM Prep	
890-1822-7	PH07	Total/NA	Solid	8015NM Prep	
890-1822-8	PH07	Total/NA	Solid	8015NM Prep	
890-1822-9	PH08	Total/NA	Solid	8015NM Prep	
MB 880-16787/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16787/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16787/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1824-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1824-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Prep Batch: 16788

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-10	PH08	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 16815

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	8015B NM	16787
890-1822-2	PH04	Total/NA	Solid	8015B NM	16787
890-1822-3	PH05	Total/NA	Solid	8015B NM	16787
890-1822-4	PH05	Total/NA	Solid	8015B NM	16787
890-1822-5	PH06	Total/NA	Solid	8015B NM	16787
890-1822-6	PH06	Total/NA	Solid	8015B NM	16787
890-1822-7	PH07	Total/NA	Solid	8015B NM	16787

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#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

#### GC Semi VOA (Continued)

#### Analysis Batch: 16815 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-8	PH07	Total/NA	Solid	8015B NM	16787
890-1822-9	PH08	Total/NA	Solid	8015B NM	16787
MB 880-16787/1-A	Method Blank	Total/NA	Solid	8015B NM	16787
LCS 880-16787/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16787
LCSD 880-16787/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16787
890-1824-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	16787
890-1824-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16787
Analysis Batch: 17055	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Total/NA	Solid	8015 NM	
890-1822-2	PH04	Total/NA	Solid	8015 NM	
890-1822-3	PH05	Total/NA	Solid	8015 NM	
890-1822-4	PH05	Total/NA	Solid	8015 NM	
890-1822-5	PH06	Total/NA	Solid	8015 NM	
890-1822-6	PH06	Total/NA	Solid	8015 NM	
890-1822-7	PH07	Total/NA	Solid	8015 NM	
890-1822-8	PH07	Total/NA	Solid	8015 NM	
890-1822-9	PH08	Total/NA	Solid	8015 NM	

Total/NA

Solid

8015 NM

#### HPLC/IC

890-1822-10

#### Leach Batch: 16762

PH08

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-1	PH04	Soluble	Solid	DI Leach	
890-1822-2	PH04	Soluble	Solid	DI Leach	
890-1822-3	PH05	Soluble	Solid	DI Leach	
890-1822-4	PH05	Soluble	Solid	DI Leach	
890-1822-5	PH06	Soluble	Solid	DI Leach	
890-1822-6	PH06	Soluble	Solid	DI Leach	
890-1822-7	PH07	Soluble	Solid	DI Leach	
890-1822-8	PH07	Soluble	Solid	DI Leach	
890-1822-9	PH08	Soluble	Solid	DI Leach	
890-1822-10	PH08	Soluble	Solid	DI Leach	
MB 880-16762/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16762/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16762/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1822-8 MS	PH07	Soluble	Solid	DI Leach	
890-1822-8 MSD	PH07	Soluble	Solid	DI Leach	

#### Analysis Batch: 16935

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1822-1	PH04	Soluble	Solid	300.0	16762
890-1822-2	PH04	Soluble	Solid	300.0	16762
890-1822-3	PH05	Soluble	Solid	300.0	16762
890-1822-4	PH05	Soluble	Solid	300.0	16762
890-1822-5	PH06	Soluble	Solid	300.0	16762
890-1822-6	PH06	Soluble	Solid	300.0	16762
890-1822-7	PH07	Soluble	Solid	300.0	16762
890-1822-8	PH07	Soluble	Solid	300.0	16762

Eurofins Carlsbad

Job ID: 890-1822-1

SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1822-1 SDG: 31403360.006

#### HPLC/IC (Continued)

#### Analysis Batch: 16935 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1822-9	PH08	Soluble	Solid	300.0	16762
890-1822-10	PH08	Soluble	Solid	300.0	16762
MB 880-16762/1-A	Method Blank	Soluble	Solid	300.0	16762
LCS 880-16762/2-A	Lab Control Sample	Soluble	Solid	300.0	16762
LCSD 880-16762/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16762
890-1822-8 MS	PH07	Soluble	Solid	300.0	16762
890-1822-8 MSD	PH07	Soluble	Solid	300.0	16762

9

Job ID: 890-1822-1 SDG: 31403360.006

#### Lab Sample ID: 890-1822-1 Matrix: Solid

Lab Sample ID: 890-1822-2

Lab Sample ID: 890-1822-3

Lab Sample ID: 890-1822-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/10/22 14:00 Date Received: 01/12/22 10:39

**Client Sample ID: PH04** 

Client: WSP USA Inc.

Project/Site: RDX 17-6

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16869	01/17/22 07:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16968	01/17/22 12:35	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 03:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 09:20	СН	XEN MID

#### **Client Sample ID: PH04**

#### Date Collected: 01/10/22 14:02

Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16869	01/17/22 07:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16968	01/17/22 13:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 03:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 09:28	CH	XEN MID

#### **Client Sample ID: PH05**

#### Date Collected: 01/10/22 14:30

#### Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16869	01/17/22 07:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16968	01/17/22 13:30	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 03:48	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		5			16935	01/18/22 09:51	СН	XEN MID

#### **Client Sample ID: PH05** Date Collected: 01/10/22 14:32 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	16869	01/17/22 07:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16968	01/17/22 13:57	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

# Released to Imaging: 8/28/2024 3046921 PMM

Job ID: 890-1822-1

SDG: 31403360.006

#### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

#### **Client Sample ID: PH05**

Date Collected: 01/10/22 14:32 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 04:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		5			16935	01/18/22 09:58	СН	XEN MID

#### **Client Sample ID: PH06**

#### Date Collected: 01/10/22 14:45 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16869	01/17/22 07:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16968	01/17/22 14:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 04:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 10:06	CH	XEN MID

#### **Client Sample ID: PH06**

Date Collected: 01/10/22 14:47 Date Received: 01/12/22 10:39

Batch Batch Dil Initial Final Batch Prepared Method Ргер Туре Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.99 g 5 mL 16834 01/14/22 09:19 KL XEN MID Total/NA 8021B 5 mL 5 mL 16936 01/16/22 04:31 MR XEN MID Analysis 1 Total BTEX XEN MID Total/NA Analysis 1 17056 01/17/22 14:46 AJ Total/NA Analysis 8015 NM 17055 01/17/22 14:15 AJ XEN MID 1 01/13/22 13:55 Total/NA Prep 8015NM Prep 10.01 g 10 mL 16787 DM XEN MID Total/NA Analysis 8015B NM 16815 01/15/22 04:52 A.I XEN MID 1 Soluble Leach DI Leach 5 g 50 mL 16762 01/13/22 12:10 SC XEN MID Soluble Analysis 300.0 16935 01/18/22 10:13 СН XEN MID 1

#### **Client Sample ID: PH07**

#### Date Collected: 01/10/22 15:05 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16834	01/14/22 09:19	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16936	01/16/22 04:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 05:14	AJ	XEN MID

**Eurofins Carlsbad** 

## Lab Sample ID: 890-1822-6

Matrix: Solid

Lab Sample ID: 890-1822-7 Matrix: Solid

#### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

## Client Sample ID: PH07

Date Collected: 01/10/22 15:05 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 10:21	СН	XEN MID

#### Client Sample ID: PH07

#### Date Collected: 01/10/22 15:07 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	16834	01/14/22 09:19	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16936	01/16/22 05:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 05:35	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 10:28	СН	XEN MID

#### Client Sample ID: PH08 Date Collected: 01/10/22 15:10 Date Received: 01/12/22 10:39

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16834	01/14/22 09:19	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16936	01/16/22 05:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16787	01/13/22 13:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16815	01/15/22 05:56	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 10:51	СН	XEN MID

#### Client Sample ID: PH08 Date Collected: 01/10/22 15:12 Date Received: 01/12/22 10:39

## Lab Sample ID: 890-1822-10

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16834	01/14/22 09:19	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16936	01/16/22 06:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16788	01/13/22 13:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16702	01/14/22 09:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	16762	01/13/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1			16935	01/18/22 10:58	CH	XEN MID

#### Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Job ID: 890-1822-1 SDG: 31403360.006

#### Lab Sample ID: 890-1822-7 Matrix: Solid

Lab Sample ID: 890-1822-8

Lab Sample ID: 890-1822-9

#### Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

Laboratory References:

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

Job ID: 890-1822-1 SDG: 31403360.006

Client: WSP USA Inc. Project/Site: RDX 17-6

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date
		ELAP	T104704400-21-22	06-30-22
• ,	• •	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for w
the agency does not o				
the agency does not o	Prep Method	Matrix	Analyte	
6 ,		Matrix Solid	Analyte Total TPH	

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Job ID: 890-1822-1 SDG: 31403360.006

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#### **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

Job ID: 890-1822-1 SDG: 31403360.006

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

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

Job ID: 890-1822-1
SDG: 31403360.006

Lab Sample ID 390-1822-1	Client Sample ID	Matrix	Collected	Received	Depth
		Solid	01/10/22 14:00	01/12/22 10:39	0.5
390-1822-2	PH04	Solid	01/10/22 14:02	01/12/22 10:39	1
90-1822-3	PH05	Solid	01/10/22 14:30	01/12/22 10:39	0.5
90-1822-4	PH05	Solid	01/10/22 14:32	01/12/22 10:39	1
390-1822-5	PH06	Solid	01/10/22 14:45	01/12/22 10:39	0.5
390-1822-6	PH06	Solid	01/10/22 14:47	01/12/22 10:39	1
390-1822-7	PH07	Solid	01/10/22 15:05	01/12/22 10:39	0.5
390-1822-8	PH07	Solid	01/10/22 15:07	01/12/22 10:39	1
390-1822-9	PH08	Solid	01/10/22 15:10	01/12/22 10:39	0.5
390-1822-10	PH08	Solid	01/10/22 15:12	01/12/22 10:39	1

.

Work Order No:	www.xenco.com Page / of /	umo	Program: UST/PST PRP Brownfields RRC Superfund		Reporting: Level II C Level III PST/UST TRRP Level IV	Deliverables: EDD 🗌 ADaPT 🗌 Other:	COUEST Preservative Codes	None: NO DI Water: H <sub>2</sub> O	-	HILE HC HOUSTHN HC	H*PO ": HP	NaHSO 4: NABIS	890-1622 Chain of Custody		NaUH+ASCORDIC ACID: SAPL	Sample Comments	Cost Center # .	1001137001								Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn u Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/7470 /7471
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	Tim Caleu	WREnergy	5315 Buena Vista Dr.		byers a wsp. com	ANALYSIS REQUEST		) (pe	aae 81 200 S	CØ	8 t	105	»,u	X	191						×				Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U
nment Testing	Xenco EL Paso, TX (9 Hobbs, NM (5	Herrie and (2 Bill to: (if different)		A Street Address:	1	2329 Email: anna.	Turn Around	5- BISC Shout	Due Date:	By Construction of the day received by the standard of the day if received by 4:30pm	Ver No Wetlee	Thermometer ID: 7NM	Correction Factor: -0.2	-	Corrected Temperature:	Matrix Date Time Depth Grab/ # of Comp Comp	5 1/10/22 1400 \$5' Gab 1	1 1 1 2011 1	1436 6.5' 1	1 1/2 2 1/ 1	1446 0.51 1	1 4.11	Ø.5'	-	1 A 7 1.01	8RCRA 13PPM Texas 11 AI TCLP/SPLP 6010 : 8RCR/
🐝 eurofins 🛛 En	Xei	Project Manager. Tose oh	wsp		EZIP: Mid La		Project Name: RDX 17-6	ber:	Project Location: Eddy Corr	Sampler's Name: Anna Byerd	DI F RECEIPT	itact:	Cooler Custody Seals: Yes No	Seals: Yes No	Total Containers:	Sample Identification	PHØY	17aHd	PHES	PHUS	PHZE	PHOL	PHB-7	tand	8 14 1A	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed

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Job Number: 890-1822-1 SDG Number: 31403360.006

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1822 List Number: 1

Creator: Clifton, Cloe

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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Job Number: 890-1822-1 SDG Number: 31403360.006

List Source: Eurofins Midland

List Creation: 01/13/22 11:26 AM

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1822 List Number: 2 Creator: Rodriguez, Leticia

<6mm (1/4").

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	N/A	

Eurofins Carlsbad Released to Imaging: 8/28/2024 3t46:21 PM Received by OCD: 7/19/2024 8:47:33 2AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

### Laboratory Job ID: 890-1927-1

Laboratory Sample Delivery Group: 31403360.01 Client Project/Site: RDX 17-6

#### For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Joseph Hernandez

RAMER

Authorized for release by: 2/24/2022 4:27:36 PM

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

LINKS Review your project results through Total Access Have a Question? Ask The Expert Visit us at: www.eurofinsus.com/Env Zeleased to Imaging: 8/28/2024 3the:21 PM

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#### **Definitions/Glossary**

Client: WSP USA Inc.

MPN

MQL

NC

ND NEG

POS PQL

PRES

QC

RER

RPD

TEF

TEQ

TNTC

RL

Job ID: 890-1927-1

Project/Site: RI		SDG: 31403360.01	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			5
Qualifier	Qualifier Description		
 F1	MS and/or MSD recovery exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		8
 F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		9
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)		

Most Probable Number

Not Calculated

Presumptive

Quality Control

Negative / Absent Positive / Present

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1927-1 SDG: 31403360.01

#### Job ID: 890-1927-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1927-1

#### Receipt

The samples were received on 2/9/2022 1:11 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 1.6°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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19048 and analytical batch 880-18980 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: (890-1919-A-1-C). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (MB 880-19049/1-A), (890-1924-A-9-C MS) and (890-1924-A-9-D MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (880-11152-A-21-C MS) and (880-11152-A-21-D MSD). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-19422 and analytical batch 880-19575 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.

Method: 8021B - Volatile Organic Compounds (GC)

Method: Total BTEX - Total BTEX Calculation

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

Result Qualifier

Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00399 U

<0.00200 U

<0.00399 U

113

114

Result Qualifier

U

Result Qualifier

<50.0 U

%Recovery

< 0.00399

#### **Client Sample Results**

RL

0.00200

0.00200

0.00200

0.00399

0.00200

0.00399

Limits

70 - 130

70 - 130

RL

RL

50.0

0.00399

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

MDL Unit

MDL Unit D

D

D

Prepared 02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

Prepared

02/11/22 07:30

02/11/22 07:30

Prepared

Prepared

Clie	nt:	WSP	USA	Inc.
Pro	ject	/Site:	RDX	17-6

Sample Depth: 0 - 4

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### **Client Sample ID: SW17**

Date Collected: 02/09/22 09:20 Date Received: 02/09/22 13:11

Lab Sample ID: 890-1927-1

Analyzed

02/11/22 17:10

02/11/22 17:10

02/11/22 17:10

02/11/22 17:10

02/11/22 17:10

02/11/22 17:10

Analyzed

02/11/22 17:10

02/11/22 17:10

Analyzed

02/14/22 10:01

Analyzed

02/17/22 15:56

Matrix: Solid

Job ID: 890-1927-1 SDG: 31403360.01

> 5 Dil Fac 1 1 1 1 Dil Fac 1 1 Dil Fac 1

	9
	3

		2

Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/10/22 13:35	02/12/22 06:43	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/10/22 13:35	02/12/22 06:43	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 13:35	02/12/22 06:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130				02/10/22 13:35	02/12/22 06:43	1
o-Terphenyl	78		70 - 130				02/10/22 13:35	02/12/22 06:43	1
— Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2430		100		mg/Kg			02/19/22 10:53	20

#### С ID: 3WIC Date Collected: 02/09/22 09:26 Date Received: 02/09/22 13:11 Sample Depth: 0 - 4

Method: 8021B - Volatile Orga	nic Compounds (	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				02/11/22 07:30	02/11/22 17:30	1

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Released to Imaging: 8/28/2024 3t46921 PMM

Matrix: Solid

#### **Client Sample Results**

Job ID: 890-1927-1 SDG: 31403360.01

# Lab Sample ID: 890-1927-2

Matrix: Solid

5

Date Collected: 02/09/22 09:26 Date Received: 02/09/22 13:11

Client Sample ID: SW18

Sample Depth: 0 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	112		70 - 130				02/11/22 07:30	02/11/22 17:30	
Method: Total BTEX - Total BTEX	(Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:43	
Method: 8015 NM - Diesel Range	Organics (DR	)) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	354		50.0		mg/Kg			02/17/22 15:56	
Mothod: 904ED NM Discut De									
Method: 8015B NM - Diesel Rang Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0		50.0		mg/Kg		02/10/22 13:35	02/12/22 07:04	
(GRO)-C6-C10					5 5				
Diesel Range Organics (Over	354		50.0		mg/Kg		02/10/22 13:35	02/12/22 07:04	
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 13:35	02/12/22 07:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				02/10/22 13:35	02/12/22 07:04	1
o-Terphenyl	90		70 - 130				02/10/22 13:35	02/12/22 07:04	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5230	F1	99.8		mg/Kg			02/19/22 11:02	20
lient Sample ID: SW19							Lab San	nple ID: 890-	1927-3
ate Collected: 02/09/22 09:35									x: Solid
ate Received: 02/09/22 13:11									
ample Depth: 0 - 4									

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/22 07:30	02/11/22 17:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				02/11/22 07:30	02/11/22 17:51	1
1,4-Difluorobenzene (Surr)	100		70 - 130				02/11/22 07:30	02/11/22 17:51	1
Method: Total BTEX - Total B	<b>FEX Calculation</b>								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:43	1
Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	11	49.9		mg/Kg			02/17/22 15:56	1

#### **Client Sample Results**

Job ID: 890-1927-1
SDG: 31403360.01

#### Client Sample ID: SW19

Date Collected: 02/09/22 09:35 Date Received: 02/09/22 13:11

Sample Depth: 0 - 4

Client: WSP USA Inc. Project/Site: RDX 17-6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9		mg/Kg		02/10/22 13:35	02/12/22 07:26	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		02/10/22 13:35	02/12/22 07:26	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/10/22 13:35	02/12/22 07:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130				02/10/22 13:35	02/12/22 07:26	1
o-Terphenyl	83		70 - 130				02/10/22 13:35	02/12/22 07:26	1

method: 500.0 - Anions, ion Chron	alography - Soluble						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3700	99.8	mg/Kg			02/19/22 11:29	20

#### **Client Sample ID: SW20**

Date Collected: 02/09/22 09:38 Date Received: 02/09/22 13:11

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/22 07:30	02/11/22 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				02/11/22 07:30	02/11/22 18:11	1
1,4-Difluorobenzene (Surr)	100		70 - 130				02/11/22 07:30	02/11/22 18:11	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			02/14/22 09:43	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	86.3		50.0		mg/Kg			02/17/22 15:56	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (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		02/10/22 13:35	02/12/22 07:48	1
Diesel Range Organics (Over	86.3		50.0		mg/Kg		02/10/22 13:35	02/12/22 07:48	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 13:35	02/12/22 07:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130				02/10/22 13:35	02/12/22 07:48	1

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Lab Sample ID: 890-1927-3 Matrix: Solid 5

Lab Sample ID: 890-1927-4 Matrix: Solid

		Clien	t Sample R	esults	;				
Client: WSP USA Inc.								Job ID: 890	-1927-1
Project/Site: RDX 17-6								SDG: 3140	3360.01
Client Sample ID: SW20							Lab Sar	nple ID: 890-	1927-4
Date Collected: 02/09/22 09:38									x: Solid
Date Received: 02/09/22 13:11									
Sample Depth: 0 - 4									
_ Method: 300.0 - Anions, Ion Ch	romatography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3590		99.0		mg/Kg			02/19/22 11:37	20
Client Sample ID: SW21							Lab Sar	nple ID: 890-	1927-5
Date Collected: 02/09/22 09:42								-	x: Solid
Date Received: 02/09/22 13:11									
Sample Depth: 0 - 4									
_ Method: 8021B - Volatile Orgar	nic Compounds (	GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 18:32	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 18:32	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 18:32	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 18:32	
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 18:32	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 18:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				02/11/22 07:30	02/11/22 18:32	1
1,4-Difluorobenzene (Surr)	97		70 - 130				02/11/22 07:30	02/11/22 18:32	1
– Method: Total BTEX - Total BTI	EX Calculation								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402		0.00402		mg/Kg			02/14/22 09:43	1
 Method: 8015 NM - Diesel Rang	no Organice (DP								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 15:56	1
_ Method: 8015B NM - Diesel Ra	nge Organics (D								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0		50.0		mg/Kg		02/10/22 13:28	02/11/22 02:47	1
(GRO)-C6-C10			50.0				00/40/00 40 00	00/44/00 00 47	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/10/22 13:28	02/11/22 02:47	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 13:28	02/11/22 02:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				02/10/22 13:28	02/11/22 02:47	1
o-Terphenyl	93		70 - 130				02/10/22 13:28	02/11/22 02:47	1
_ Method: 300.0 - Anions, Ion Ch	romatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4990		100		mg/Kg	_		02/19/22 12:04	20

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U

<0.00201 U

<0.00201 U

<0.00402 U

<0.00201 U

<0.00402 U

Dil Fac

1

1

1

1

1

1

#### **Client Sample Results**

RL

0.00201

0.00201

0.00201

0.00402

0.00201

0.00402

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

02/11/22 07:30

Job ID: 890-1927-1 SDG: 31403360.01

# Client Sample ID: SW22

Date Collected: 02/09/22 09:45 Date Received: 02/09/22 13:11

Sample Depth: 0 - 4

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

Client: WSP USA Inc.

Project/Site: RDX 17-6

Lab Sample ID: 890-1927-6 Matrix: Solid

Analyzed

02/11/22 18:52

02/11/22 18:52

02/11/22 18:52

02/11/22 18:52

02/11/22 18:52

02/11/22 18:52

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				02/11/22 07:30	02/11/22 18:52	1
1,4-Difluorobenzene (Surr)	104		70 - 130				02/11/22 07:30	02/11/22 18:52	1
- Method: Total BTEX - Total BTEX	<b>Calculation</b>								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:43	1
- Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 15:56	1
- Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (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		02/10/22 13:28	02/11/22 03:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/10/22 13:28	02/11/22 03:09	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 13:28	02/11/22 03:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				02/10/22 13:28	02/11/22 03:09	1
o-Terphenyl _	95		70 - 130				02/10/22 13:28	02/11/22 03:09	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9120		253		mg/Kg			02/19/22 12:13	50
Client Sample ID: SW23							Lab Sar	nple ID: 890-	1927-7
Date Collected: 02/09/22 09:47								Matri	x: Solid
Date Received: 02/09/22 13:11									
Sample Depth: 0 - 4									
Method: 8021B - Volatile Organic	c Compounds (	GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 19:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/22 07:30	02/11/22 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				02/11/22 07:30	02/11/22 19:13	1

#### **Client Sample Results**

Job ID: 890-1927-1 SDG: 31403360.01

# Lab Sample ID: 890-1927-7

Matrix: Solid

5

Date Collected: 02/09/22 09:47 Date Received: 02/09/22 13:11

Client Sample ID: SW23

Sample Depth: 0 - 4

Client: WSP USA Inc.

Project/Site: RDX 17-6

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	83		70 - 130				02/11/22 07:30	02/11/22 19:13	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			02/14/22 09:43	1
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 13:20	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	· • ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		02/10/22 14:29	02/13/22 17:05	
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		02/10/22 14:29	02/13/22 17:05	
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/10/22 14:29	02/13/22 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130				02/10/22 14:29	02/13/22 17:05	1
o-Terphenyl	80		70 - 130				02/10/22 14:29	02/13/22 17:05	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Client: WSP USA Inc. Project/Site: RDX 17-6

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-11145-A-11-A MS	Matrix Spike	113	74		-
880-11145-A-11-B MSD	Matrix Spike Duplicate	105	106		
890-1927-1	SW17	113	114		
890-1927-2	SW18	114	112		
890-1927-3	SW19	105	100		
890-1927-4	SW20	105	100		
890-1927-5	SW21	110	97		
890-1927-6	SW22	109	104		
890-1927-7	SW23	105	83		
LCS 880-19014/1-A	Lab Control Sample	98	95		
LCSD 880-19014/2-A	Lab Control Sample Dup	109	102		
MB 880-19014/5-A	Method Blank	105	94		
Surrogate Legend					
BFB = 4-Bromofluorober	zene (Surr)				
DFBZ = 1,4-Difluorobenz					

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

Matrix: Solid

880-11152-A-21-C MS         I           880-11152-A-21-D MSD         I           890-1919-A-1-D MS         I           890-1919-A-1-E MSD         I           890-1924-A-9-C MS         I           890-1924-A-9-D MSD         I	Client Sample ID Matrix Spike Matrix Spike Duplicate Matrix Spike Matrix Spike Duplicate Matrix Spike Matrix Spike Duplicate	1CO1 (70-130) 63 S1- 65 S1- 123 120 75	OTPH1 (70-130) 63 S1- 64 S1- 82 85 68 S1-	
880-11152-A-21-C MS         I           880-11152-A-21-D MSD         I           890-1919-A-1-D MS         I           890-1919-A-1-E MSD         I           890-1924-A-9-C MS         I           890-1924-A-9-D MSD         I	Matrix Spike Matrix Spike Duplicate Matrix Spike Matrix Spike Duplicate Matrix Spike	63 S1- 65 S1- 123 120 75	63 S1- 64 S1- 82 85	
880-11152-A-21-D MSD       I         890-1919-A-1-D MS       I         890-1919-A-1-E MSD       I         890-1924-A-9-C MS       I         890-1924-A-9-D MSD       I	Matrix Spike Duplicate Matrix Spike Matrix Spike Duplicate Matrix Spike	65 S1- 123 120 75	64 S1- 82 85	
890-1919-A-1-D MS I 890-1919-A-1-E MSD I 890-1924-A-9-C MS I 890-1924-A-9-D MSD I	Matrix Spike Matrix Spike Duplicate Matrix Spike	123 120 75	82 85	
890-1919-A-1-E MSD I 890-1924-A-9-C MS I 890-1924-A-9-D MSD I	Matrix Spike Duplicate Matrix Spike	120 75	85	
890-1924-A-9-C MS I 890-1924-A-9-D MSD I	Matrix Spike	75		
890-1924-A-9-D MSD			68 S1-	
	Matrix Spike Duplicate		00.01	
890-1927-1		77	68 S1-	
	SW17	77	78	
890-1927-2	SW18	89	90	
890-1927-3	SW19	82	83	
890-1927-4	SW20	73	72	
890-1927-5	SW21	88	93	
890-1927-6	SW22	89	95	
890-1927-7	SW23	73	80	
LCS 880-19049/2-A	ab Control Sample	99	93	
LCSD 880-19049/3-A	Lab Control Sample Dup	99	93	
MB 880-19049/1-A	Method Blank	65 S1-	69 S1-	

```
OTPH = o-Terphenyl
```

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

### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-19048/2-A	Lab Control Sample	91	101	

Prep Type: Total/NA

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Prep Type: Total/NA

Job ID: 890-1927-1 SDG: 31403360.01

Prep Type: Total/NA

# Surrogate Summary

Project/Site: RDX 17-6		
Method: 8015B NM - Diesel Range Organics (DF	(GC) (Continued)	
Matrix: Solid		F

				refeelt ourogate Recovery (Receptance Limits)	
		1CO2	OTPH2		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
LCS 880-19055/2-A	Lab Control Sample	95	106		
LCSD 880-19048/3-A	Lab Control Sample Dup	100	112		6
LCSD 880-19055/3-A	Lab Control Sample Dup	106	114		Ο
MB 880-19048/1-A	Method Blank	94	99		
MB 880-19055/1-A	Method Blank	78	82		
Surrogate Legend					

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc.

Project/Site: RDX 17-6

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19014 Matrix: Solid	I/5-A							Client Sa	ample ID: Me Prep Typ		
Analysis Batch: 19116									Prep Ba		
Analysis Baton. 19110	ME	8 MB							Перы		1001
Analyte		t Qualifier	RL		MDL Unit		D	Prepared	Analyzed		Dil Fa
Benzene	<0.00200		0.00200		mg/K	a		11/22 07:30	02/11/22 11:2		Dirit
Toluene	<0.00200		0.00200		mg/K	-		11/22 07:30	02/11/22 11:2		
Ethylbenzene	<0.00200		0.00200		mg/K	-		11/22 07:30	02/11/22 11:2		
	<0.00200								02/11/22 11:2		
m-Xylene & p-Xylene	<0.00400		0.00400		mg/K			11/22 07:30			
o-Xylene			0.00200		mg/K	-		11/22 07:30	02/11/22 11:2		
Xylenes, Total	<0.00400	0	0.00400		mg/K	.g	02/	11/22 07:30	02/11/22 11:2	. I	
	ME	B MB									
Surrogate	%Recovery	/ Qualifier	Limits					Prepared	Analyzed		Dil F
4-Bromofluorobenzene (Surr)	105	5	70 _ 130				02/	/11/22 07:30	02/11/22 11:2	21	
1,4-Difluorobenzene (Surr)	94	1	70 - 130				02/	/11/22 07:30	02/11/22 11:2	21	
Lab Sample ID: LCS 880-1901	4/1-A						Clien	t Sample	ID: Lab Cont		
Matrix: Solid									Ргер Тур		
Analysis Batch: 19116									Prep Ba	tch:	1901
			Spike		LCS				%Rec.		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Benzene			0.100	0.09671		mg/Kg		97	70 - 130		
Toluene			0.100	0.09263		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09502		mg/Kg		95	70 _ 130		
X I 0 X I			0.200	0.1926		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1020							
m-Xylene & p-Xylene p-Xylene			0.100	0.09491		mg/Kg		95	70 - 130		
	LCS LC	s						95	70 <sub>-</sub> 130		
o-Xylene	LCS LC %Recovery Qu		0.100					95	70 - 130		
o-Xylene	%Recovery Qu	S alifier	0.100 <i>Limits</i>					95	70 - 130		
			0.100					95	70 - 130		
o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	<u>%Recovery</u> Qu 98		0.100 <i>Limits</i> 70 - 130					95	70 - 130		
o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130			mg/Kg	ent Sai		70 <sub>-</sub> 130 <b>ab Control S</b>	ample	e Du
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130			mg/Kg	ent Sai				
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130			mg/Kg	ent Sar		ab Control S	e: Tot	tal/N
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130	0.09491	LCSD	mg/Kg	ent Sar		ab Control S Prep Typ	e: Tot	tal/N 1901
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid	%Recovery Qu 98 95		0.100 Limits 70 - 130 70 - 130	0.09491 LCSD	LCSD Qualifier	mg/Kg	ent Sar		ab Control S Prep Typ Prep Ba %Rec.	e: Tot	tal/N 1901 RF
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	0.09491 LCSD		mg/Kg		nple ID: L	ab Control S Prep Typ Prep Ba %Rec.	e: Tot atch:	tal/N 1901 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte	%Recovery Qu 98 95		0.100 <i>Limits</i> 70 - 130 70 - 130 Spike Added	0.09491 LCSD Result		mg/Kg Cli		nple ID: L	ab Control S Prep Typ Prep Ba %Rec. Limits	e: Tot atch:	tal/N 1901 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene	%Recovery Qu 98 95		0.100 Limits 70 - 130 70 - 130 Spike Added 0.100	0.09491 LCSD Result 0.1006		mg/Kg		<b>nple ID: L</b> 	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130	e: Tot atch: RPD 4	tal/N 1901 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene	%Recovery Qu 98 95		0.100 Limits 70 - 130 70 - 130 Spike Added 0.100 0.100	0.09491 LCSD Result 0.1006 0.1058		Cli mg/Kg		<b>nple ID: L</b> 	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130	e: Tot atch: RPD 4 13	tal/N 1901 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene	%Recovery Qu 98 95		0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103		mg/Kg Cli mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110	<b>ab Control S</b> <b>Prep Typ</b> <b>Prep Ba</b> <b>%Rec.</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15	tal/N 1901 RF Lin
o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<u>%Recovery</u> Qu 98 95 014/2-A	alifier _	0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene	<u>%Recovery</u> Qu 98 95 014/2-A 	alifier	0.100 Limits 70 - 130 70 - 130 <b>Spike</b> Added 0.100 0.100 0.100 0.200 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene Surrogate	<u>%Recovery</u> Qu 98 95 014/2-A 	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Limits	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery         Qu           98         95           914/2-A	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene p-Xylene Surrogate	<u>%Recovery</u> Qu 98 95 014/2-A 	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Limits	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: RPD 4 13 15 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery         Qu           98         95           914/2-A	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: 8PD 4 13 15 18 18	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-11145-A-1	%Recovery         Qu           98         95           914/2-A	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	e: Tot atch: 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	tal/N 190' RI Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-11145-A-1 Matrix: Solid	%Recovery         Qu           98         95           914/2-A	alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297		Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130	e: Tod atch: RPD 4 13 15 18 18 18 atrix e: Tod	tal/N 1901 RR Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-11145-A-1	%Recovery         Qu           98         95           95         95           014/2-A	alifier SD alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Umits 70 - 130 70 - 130	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297 0.1138	Qualifier	Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 8 Sample ID: M Prep Typ Prep Ba	e: Tod atch: RPD 4 13 15 18 18 18 atrix e: Tod	tal/N 1901 RF Lin
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-11145-A-1 Matrix: Solid Analysis Batch: 19116	%Recovery         Qu           98         95           914/2-A	alifier SD alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.200 0.100 0.100 0.200 0.100 0.100 0.100 0.200 0.100 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000 0.00000 0.000000	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297 0.1138	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 8 8 8 9 9 9 9 9 7 9 9 7 9 9 7 9 9 7 9 9 7 7 9 7 9 7 7 9 7 9 7 7 9 7 7 9 9 7 9 9 9 7 9	e: Tod atch: RPD 4 13 15 18 18 18 atrix e: Tod	tal/N 1901 RP Lim 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19116 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-11145-A-1 Matrix: Solid	%Recovery         Qu           98         95           95         95           014/2-A	alifier SD alifier	0.100 Limits 70 - 130 70 - 130 70 - 130 Spike Added 0.100 0.100 0.100 0.200 0.100 0.200 0.100 Umits 70 - 130 70 - 130	0.09491 LCSD Result 0.1006 0.1058 0.1103 0.2297 0.1138	Qualifier	Cli <u>Unit</u> mg/Kg mg/Kg mg/Kg mg/Kg		<b>%Rec</b> 101 106 110 115 114	ab Control S Prep Typ Prep Ba %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 8 Sample ID: M Prep Typ Prep Ba	e: Tod atch: RPD 4 13 15 18 18 18 atrix e: Tod	tal/N 1901 RP Lim

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#### **Released to Imaging: 8/28/2024 3:46:921 PMM**

2/24/2022

Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1927-1 SDG: 31403360.01

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

Ehybercene         <0.00190	Lab Sample ID: 880-11145-A-1	1-A MS										Client S	Sample ID:		-						
Sample         Spike         MS         MS         Viewer         Viewer           inalyte         Result         Qualifier         Added         Result         Qualifier         Mail         D         N/Rec         Limits           x-Sylene & pSylene         <0.00398         U         0.202         0.1659         mg/Kg         92         70 - 130           x-Sylene & pSylene         <0.00199         U         0.101         0.09811         mg/Kg         92         70 - 130           x-Sylene & pSylene         'Secorrey         Qualifier         Limits         mg/Kg         92         70 - 130           x-Sylene & pSylene         'Secorrey         Qualifier         Limits         Prop. Type: Total/N           x-Biomofulcorbenzene (Surr)         71         70 - 130         Prop. Type: Total/N         Prop. Type: Total/N           x-Abbrechamere (Surr)         74         70 - 130         Secorre         Water         Prop. Type: Total/N           x-Abbrechamere (Surr)         74         70 - 130         Added         Result         Qualifier         Unit         D         %Rec         Recourt         Recourt         Recourt         Recourt         Recourt         Recourt         Recourt         Recourt         Reco	Matrix: Solid												Prep Ty	pe: To	tal/N/						
Natyle         Result         Qualifier         Added         Result         Qualifier         Unit         D         %Rec         Limits           Strylene R, Sylene	Analysis Batch: 19116												Prep E	Batch:	1901						
Ethybenzene         <0.00199		Sample	Sam	ple	Spike	MS	MS						%Rec.								
xXylene & p-Xylene       <0.00398 U	Analyte	Result	Qua	lifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits								
Kxylene         <0.00199 U         0.101         0.09811         mgKg         97         70.130           MS MS           Surrogate         %Recovery         Qualifier         Limits           14-Difluorobenzene (Surr)         74         70.130         Client Sample ID: Matrix Spike Duplicat           Lab Sample ID: 880-11145-A-11-B MSD         Client Sample ID: Matrix Spike Duplicat         Prep Type: Total/N           Analysis Batch: 19116         Sample Sample O         0.00990         0.008902         mgKg         90         70.130         4         32           Sample Result         Qualifier         Added         Result         Qualifier         mgKg         90         70.130         4         32           Sample Sample D:         0.00990         0.00990         0.08922         mgKg         92         70.130         4         32           Sample D:         MSD MSD         mgKg         96         70.130         4         32           Surrogate         MSD MSD         MSD MSD         mgKg         96         70.130         4         32           Surrogate         MSD MSD         MSD MSD         mgKg         96         70.130         4         33           Surrogate	Ethylbenzene	< 0.00199	U		0.101	0.08978			mg/Kg			87	70 - 130								
MS         MS         MS           Surrogate         \$68covery         Qualifier         Limits           FBromofluoroberzene (Surr)         74         70 - 130           L4-Diluoroberzene (Surr)         74         70 - 130           Matrix         Solid         Prep Type: Total/N           Matrix         Sample         Sample         Sample           Matrix         Solid         Prep Type: Total/N           Matrix         Solid         NSD         MSD           Matrix         Solid         MSD         MSD           Matrix         Solid         MSD         MSD           Sector         Result         Qualifier         Unit         D         %Rec           Sinvenzee         <0.00199	n-Xylene & p-Xylene	<0.00398	U		0.202	0.1859			mg/Kg			92	70 - 130								
Surragate         %Recovery         Qualifier         Limits           H=Bromoliuorobenzene (Surr)         113         70 - 130           L=Bromoliuorobenzene (Surr)         74         70 - 130           Lab Sample Die 800-11145-A-11-B MSD Matrix: SOid Analysis Batch: 19116         Client Sample D: Matrix Spike Duplicat Prop Type: Total/N Prop Batch: 1900           Inalyte         Result         Qualifier         MSD         MSD         %Rec.         RP           Inalyte         Result         Qualifier         Added         Result         Qualifier         Unit         P         %Rec.         RP           Single Sample         Sample Sample         Spike         MSD         MSD         %Rec.         RP         No         %Rec.         RP         No         %Rec.         RP         Limits         RP         No         %Rec.         RP         No         %Rec.         RP         No         %Rec.         RP         No         <	o-Xylene	<0.00199	U		0.101	0.09811			mg/Kg			97	70 - 130								
Bromofluorobenzene (Surr)         113         70 - 130           4-Difluorobenzene (Surr)         74         70 - 130           Abbilluorobenzene (Surr)         74         70 - 130           ab Sample ID: 880-11145-A-11-B MSD         Client Sample ID: Matrix Spike Duplicat           Matrix: Solid         Prep Type: Total/N           Analysis Batch: 19116         Sample Sample Sample Spike         MSD MSD         %Rec.           Result Qualifier         Added         Result Qualifier         Unit         D         %Rec.           Brezzene         <0.00199 U		MS	мs																		
4.4.Difluorobenzene (Surr)       74       70.130         Asb Sample ID: 880-11145-A-11-B MSD Matrix: Solid Analysis Batch: 19116       Client Sample ID: Matrix Spike Duplicat Prep Type: Total/N Brep Eatch: 1901         Analysis Batch: 19116       Sample       Sample       Spike       MSD       MSD       MSD       WRD:       Prep Eatch: 1901         Imaging       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits       RPD       Lin         Imaging       0.00199       U       0.0990       0.089292       mg/Kg       90       70.130       4       3         Imaging       0.00199       U       0.0990       0.09292       mg/Kg       96       70.130       3 <td>Surrogate</td> <td>%Recovery</td> <td>Qua</td> <td>lifier</td> <td>Limits</td> <td></td>	Surrogate	%Recovery	Qua	lifier	Limits																
Lab Sample ID: 880-11145-A-11-B MSD Matrix: Sold         Client Sample ID: Matrix Spike Duplicat Prep Type: Total/N Prep Batch: 1901           Analyte Berzene         Result Qualifier Mode         Added Result 0.00199         MSD 0.0990         MSD 0.0990         MSD 0.09904         MSD mg/Kg         90         70.130         14         23           Berzene         <0.00199         U         0.0990         0.09904         mg/Kg         90         70.130         4         23           Berzene         <0.00199         U         0.0990         0.09902         mg/Kg         90         70.130         4         23           Burrogate         <0.00199         U         0.0990         0.09922         mg/Kg         96         70.130         4         33         3	I-Bromofluorobenzene (Surr)	113			70 - 130																
Matrix: Solid Analysis Batch: 1916         Prep Type: Total/N Prep Batch: 1906           Analysis Batch: 1916         Sample         Sample         Spike         MSD         MSD         D         Prep Batch: 1907           Analyte         Result         Qualifier         Added         Result         Qualifier         Unit         D         %Rec.         Rep         Limits         RPD         Lim           Banzene         <0.00199         U         0.0990         0.08902         mg/Kg         90         70.130         14         23           Stiphenzene         <0.00199         U         0.0990         0.08922         mg/Kg         96         70.130         3	,4-Difluorobenzene (Surr)	74			70 - 130																
Analysis Batch: 19116         Prop Batch: 1901           Nanatyte         Result Qualifier         Added         Result Qualifier         MSD         MSD         MSD         %Rec.         Prop Batch: 1901           Goldenee         <0.00199	_ab Sample ID: 880-11145-A-1	1-B MSD								Clie	nt Sa	mple ID:	Matrix Spi	ke Duj	plicat						
Sample         Sample         Spike         MSD         MSD         %Rec.         Rept         Rept         Rept         Rept         Rept         Rept         Lin           Inalyte         < <td>&lt;<td>&lt;<td>0.0199         0         0.0990         0.08904         mg/Kg         90         70-130         14         1           Solutione         &lt;<td>&lt;<td>&lt;<td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td><td>Matrix: Solid</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Prep Ty</td><td>pe: To</td><td>tal/N/</td></td></td></td></td></td>	< <td>&lt;<td>0.0199         0         0.0990         0.08904         mg/Kg         90         70-130         14         1           Solutione         &lt;<td>&lt;<td>&lt;<td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td><td>Matrix: Solid</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Prep Ty</td><td>pe: To</td><td>tal/N/</td></td></td></td></td>	< <td>0.0199         0         0.0990         0.08904         mg/Kg         90         70-130         14         1           Solutione         &lt;<td>&lt;<td>&lt;<td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td><td>Matrix: Solid</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Prep Ty</td><td>pe: To</td><td>tal/N/</td></td></td></td>	0.0199         0         0.0990         0.08904         mg/Kg         90         70-130         14         1           Solutione         < <td>&lt;<td>&lt;<td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td><td>Matrix: Solid</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Prep Ty</td><td>pe: To</td><td>tal/N/</td></td></td>	< <td>&lt;<td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td><td>Matrix: Solid</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Prep Ty</td><td>pe: To</td><td>tal/N/</td></td>	< <td>0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3&lt;</td> <td>Matrix: Solid</td> <td></td> <td>Prep Ty</td> <td>pe: To</td> <td>tal/N/</td>	0.01990         0         0.0990         0.08922         mg/Kg         90         70-130         3<	Matrix: Solid												Prep Ty	pe: To	tal/N/
Sample         Sample         Spike         MSD         MSD         %Rec.         Republic         RPD         Lint         RPD         RPD         Lint         RPD	Analysis Batch: 19116												Prep E	Batch:	1901 <sup>4</sup>						
Benzene         < 0.00199         U         0.0990         0.08904         mg/Kg         90         70.130         14         C           Foluene         < 0.00199	-	Sample	Sam	ple	Spike	MSD	MSD	)							RPI						
Toluene       <0.00199	Analyte	Result	Qua	lifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Lim						
Toluene         < 0.00199         U         0.0990         0.08922         mg/Kg         90         70.130         4         4           Ethylenezene         < 0.00199	Benzene	<0.00199	U		0.0990	0.08904			mg/Kg			90	70 - 130	14	3						
Ethylbenzene         <0.00199         U         0.0990         0.09292         mg/Kg         92         70.130         3	Foluene	<0.00199	U		0.0990	0.08922						90	70 - 130	4	3						
Main Sylene       < 0.00398 U       0.198       0.1908       mg/Kg       96       70.130       3 <td>Ethylbenzene</td> <td>&lt;0.00199</td> <td>U</td> <td></td> <td>0.0990</td> <td>0.09292</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>92</td> <td>70 - 130</td> <td>3</td> <td>3</td>	Ethylbenzene	<0.00199	U		0.0990	0.09292						92	70 - 130	3	3						
Sylene         <0.00199         U         0.0990         0.09456         mg/Kg         96         70.130         4         5           Surrogate         %Recovery         Qualifier         Limits           H-Bromofluorobenzene (Surr)         105         70.130         70.130         70.130         70.130           ethod:         8015B NM - Diesel Range Organics (DRO) (GC)         Client Sample ID: MB 880-19048/1-A         Client Sample ID: Method Blan         Prep Type: Total/N           Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dil F           GRO)-C6-C10         Solice Range Organics (Over         <50.0		<0.00398	U		0.198	0.1908						96	70 - 130	3	3						
Surrogate       %Recovery       Qualifier       Limits         4-Bromofluorobenzene (Surr)       105       70.130         1.4-Difluorobenzene (Surr)       106       70.130         1.4-Difluorobenzene (Surr)       106       70.130         Iethod: 8015B NM - Diesel Range Organics (DRO) (GC)       Ethod: 8015B NM - Diesel Range Organics (DRO) (GC)         Lab Sample ID: MB 880-19048/1-A       Client Sample ID: Method Blam         Matrix: Solid       Prep Type: Total/N         Analysis Batch: 18980       MB         Analyte       Result       Qualifier         Analyte       Result       Qualifier         GRO)-C6-C10       Diesel Range Organics (Over       <50.0															3						
4-Bromofluorobenzene (Surr)       105       70 - 130         1,4-Difluorobenzene (Surr)       106       70 - 130         Itethod: 8015B NM - Diesel Range Organics (DRO) (GC)       Client Sample ID: MB 880-19048/1-A       Client Sample ID: Method Blar         Matrix: Solid       Prep Type: Total/N       Prep Type: Total/N         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil Fi         Gasoline Range Organics (Over       <50.0		MSD	MSD	)																	
Matrix: Solid       MB       Client Sample ID: MB 880-19048/1-A         Matrix: Solid       MB       Prep Type: Total/N         Analyte       Result       Qualifier       RL       MDL       Unit       D       Prepared       Analyzed       Dil Fi         GRO)-C6-C10       Diesel Range Organics (Over       <50.0	Surrogate	%Recovery	Qua	lifier	Limits																
Idethod: 8015B NM - Diesel Range Organics (DRO) (GC)         Lab Sample ID: MB 880-19048/1-A         Matrix: Solid       Client Sample ID: Method Blan         Matrix: Solid       Prep Type: Total/N         Analysis Batch: 18980       MB MB         Analyte       Result Qualifier       RL       MDL       Unit       Prepared       Analyzed       Dil Fe         GRO, O-Ge-C10       Oligesel Range Organics (Over       < 50.0       U       50.0       U       Solo       mg/Kg       O2/10/22 13:28       O2/10/22 20:24         MB       MB       MB       MB       MB       MB       Dif Fe         GRO, O-Ge-C10       Oligesel Range Organics (Over       < 50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         Dil Range Organics (Over C28-C36)       < 50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         MB       MB       MB       MB       MB       MB       MB       MB       <	4-Bromofluorobenzene (Surr)	105			70 - 130																
Matrix: Solid Analysis Batch: 18980Prep Type: Total/N Prep Batch: 1904MBMBAnalyteResultQualifierRLMDLUnitDPreparedAnalyzedDil FaGasoline Range Organics<50.0	1,4-Difluorobenzene (Surr)	106			70 - 130																
AnalyteResultQualifierRLMDLUnitDPreparedAnalyzedDil FaGasoline Range Organics<50.0U50.0mg/Kg02/10/22 13:2802/10/22 20:2402/10/22 20:2402/10/22 20:2402/10/22 20:24Diesel Range Organics (Over<50.0U50.0mg/Kg02/10/22 13:2802/10/22 20:2402/10/22 20:24Diesel Range Organics (Over C28-C36)<50.0U50.0mg/Kg02/10/22 13:2802/10/22 20:2402/10/22 20:24Dil Range Organics (Over C28-C36)<50.0U50.0mg/Kg02/10/22 13:2802/10/22 20:2402/10/22 20:24MBMBSurrogateQualifierLimitsDil Fa1-Chlorooctane9470 - 13002/10/22 13:2802/10/22 20:24	Lab Sample ID: MB 880-19048 Matrix: Solid				80) (GC)							Client Sa	Prep Ty	pe: To	tal/N						
Gasoline Range Organics       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         GRO)-C6-C10       Diesel Range Organics (Over       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         Diesel Range Organics (Over       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         C10-C28)         50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         DII Range Organics (Over C28-C36)       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         MB       MB               Surrogate       %Recovery       Qualifier       Limits              I-Chlorooctane       94       70 - 130       70 - 130																					
GRO)-C6-C10       Diesel Range Organics (Over       <50.0				-			MDL			<u>D</u>		•			Dil Fa						
Diesel Range Organics (Over       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         C10-C28)       OII Range Organics (Over C28-C36)       <50.0		<	50.0	U	50	).0		mg/Kg			02/10	0/22 13:28	02/10/22 20	):24							
DII Range Organics (Over C28-C36)       <50.0       U       50.0       mg/Kg       02/10/22 13:28       02/10/22 20:24         MB       MB       MB       MB       MB       Prepared       Analyzed       Dil Fa         Surrogate       %Recovery       Qualifier       Limits       Output		<	50.0	U	50	0.0		mg/Kg			02/10	0/22 13:28	02/10/22 20	):24							
Surrogate%RecoveryQualifierLimitsPreparedAnalyzedDil Fa1-Chlorooctane9470 - 13002/10/22 13:2802/10/22 20:2402/10/22 20:24	,	<	50.0	U	50	0.0		mg/Kg			02/10	0/22 13:28	02/10/22 20	):24							
I-Chlorooctane         94         70 - 130         02/10/22 13:28         02/10/22 20:24																					
	-	%Reco		Qualifier								-	·		Dil Fa						
D-Terphenyl 99 70 - 130 02/10/22 13:28 02/10/22 20:24	-Chlorooctane																				
	ı-Terphenyl		99		70 - 130	)					02/1	0/22 13:28	02/10/22 20	0:24							
Lab Sample ID: LCS 880-19048/2-A Client Sample ID: Lab Control Sample	Matrix: Solid												Pren Tv	no: To	tal/N						

#### Matrix: Solid Prep Type: Total/NA Analysis Batch: 18980 Prep Batch: 19048 %Rec. Spike LCS LCS Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 960.7 96 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 944.6 mg/Kg 94 70 - 130 C10-C28)

Eurofins Carlsbad

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: RDX 17-6

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

ab Sample ID: LCS 880-19	048/2-A						Client	Sample	D: Lab Co	ontrol Sa	ample
Matrix: Solid										ype: To	
Analysis Batch: 18980										Batch:	
, , , , , , , , , , , , , , , , , , ,	LCS										
Surrogate 1-Chlorooctane	% <b>Recovery</b> 	Qualifier	Limits 70 - 130								
	91 101		70 - 130 70 - 130								
p-Terphenyl	101		70 - 130								
Lab Sample ID: LCSD 880-1	9048/3-A					Clie	nt Sam	ple ID: I	Lab Contro	I Sampl	e Dup
Matrix: Solid										ype: To	
Analysis Batch: 18980										Batch:	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics GRO)-C6-C10			1000	1022		mg/Kg		102	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	1026		mg/Kg		103	70 - 130	8	20
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	112		70 - 130								
Analysis Batch: 18980	Sample	•	Spike	MS	MS				Prep %Rec.	Batch:	19048
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics GRO)-C6-C10	532		1000	1613		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	2800	F1	1000	3100	F1	mg/Kg		30	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	123		70 - 130								
p-Terphenyl	82		70 - 130								
	4 5 1105										
Lab Sample ID: 890-1919-A	-1-E MSD					CI	ient Sa	imple ID	): Matrix Sp		
Matrix: Solid										ype: To Batch:	
Analysis Batch: 18980	Sample	Sample	Spike	MSD	MSD				%Rec.	BatCII:	19048 RPD
Analyte	•	Sample Qualifier	Added		Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
Gasoline Range Organics			998	1549		mg/Kg		102	70 - 130	4	20
GRO)-C6-C10	302		000	1010				.02			20
Diesel Range Organics (Over C10-C28)	2800	F1	998	3065	F1	mg/Kg		26	70 - 130	1	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
Surroyate											
1-Chlorooctane	120		70 - 130								

Client: WSP USA Inc.

Project/Site: RDX 17-6

# **QC Sample Results**

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Job ID: 890-1927-1 SDG: 31403360.01

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

	/ <b>1-A</b>											client Sa	mple ID:		
Matrix: Solid													Prep 1		
Analysis Batch: 19105													Prep	Batch	: <b>190</b> 4
		MB													
Analyte	Re	sult	Qualifier		RL	I	MDL	Unit		D	Pr	repared	Analyz	ed	Dil Fa
Gasoline Range Organics	<	50.0	U		50.0			mg/Kg	l	(	)2/10	0/22 13:35	02/11/22	22:47	
(GRO)-C6-C10	-	50.0			50.0			malla		,	20/4/	100 10.05	00/11/00	00.47	
Diesel Range Organics (Over C10-C28)	~:	50.0	0		50.0			mg/Kg		(	JZ/ 10	0/22 13:35	02/11/22	22.47	
Oll Range Organics (Over C28-C36)	</td <td>50.0</td> <td>U</td> <td></td> <td>50.0</td> <td></td> <td></td> <td>mg/Kg</td> <td>I</td> <td>(</td> <td>)2/10</td> <td>0/22 13:35</td> <td>02/11/22</td> <td>22:47</td> <td></td>	50.0	U		50.0			mg/Kg	I	(	)2/10	0/22 13:35	02/11/22	22:47	
•	~-		MB								_				
Surrogate 1-Chlorooctane	%Reco	-		Limi 70						_		repared 0/22 13:35	Analyz 02/11/22		Dil Fa
			S1- S1-	70 - 70 - 1											
o-Terphenyl		69	51-	70 -	130					(	JZ/10	0/22 13:35	02/11/22	22:47	
Lab Sample ID: LCS 880-19049	9/2-A									Cli	ent	Sample I	ID: Lab Co	ontrol	Sampl
Matrix: Solid													Prep 1		
Analysis Batch: 19105														Batch	
-				Spike		LCS	LCS						• %Rec.		
Analyte				Added	I	Result	Qual	ifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				1000		956.4			mg/Kg			96	70 - 130		
(GRO)-C6-C10															
Diesel Range Organics (Over				1000		965.5			mg/Kg			97	70 - 130		
C10-C28)															
	LCS	LCS													
Surrogate	%Recovery	Qua	lifier	Limits											
1-Chlorooctane	99			70 - 130											
o-Terphenyl	93														
				70 - 130											
Lab Sample ID: LCSD 880-190	AQ/3_A			70 - 130					Cli	ont S	am	nie ID: L	ab Contro	Sami	olo Du
	49/3-A			70 - 130					Cli	ent S	am	ple ID: La	ab Contro Pren 1	-	
Matrix: Solid	49/3-A			70 - 130					Cli	ent S	am	ple ID: La	Prep 1	Type: T	otal/N
Matrix: Solid	49/3-A			70 - 130 Spike		LCSD	LCSI	D	Cli	ent S	am	ple ID: La	Prep 1	-	otal/N
Matrix: Solid Analysis Batch: 19105	49/3-A					LCSD Result			Cli Unit	ent S	am D	ple ID: La %Rec	Prep 1 Prep	Type: T	otal/N : 1904 RP
Lab Sample ID: LCSD 880-190 Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics	49/3-A			Spike						ent S		-	Prep 1 Prep %Rec.	ype: T Batch	otal/N : 1904 RP
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics	<b>49/3-A</b>			Spike Added		Result			Unit	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Batch RPD	otal/N : 1904 RP
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	49/3-A			Spike Added		Result			Unit	ent S		%Rec	Prep 1 Prep %Rec. Limits	Batch RPD	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	49/3-A			Spike Added 1000		<b>Result</b> 894.9			Unit mg/Kg	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Spe: T Batch RPD 7	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	49/3-A	LCS		Spike Added 1000		<b>Result</b> 894.9			Unit mg/Kg	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Spe: T Batch RPD 7	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 <sup>Analyte</sup>				Spike Added 1000		<b>Result</b> 894.9			Unit mg/Kg	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Spe: T Batch RPD 7	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCSD			<b>Spike</b> <b>Added</b> 1000 1000		<b>Result</b> 894.9			Unit mg/Kg	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Spe: T Batch RPD 7	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	LCSD %Recovery			Spike Added 1000 1000 Limits		<b>Result</b> 894.9			Unit mg/Kg	ent S		%Rec	Prep 1 Prep %Rec. Limits 70 - 130	Spe: T Batch RPD 7	otal/N : 1904 RP Lim
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	LCSD %Recovery 99 93			<b>Spike</b> <b>Added</b> 1000 1000 <u>Limits</u> 70 - 130		<b>Result</b> 894.9			Unit mg/Kg	ent S		<b>%Rec</b> 89 90	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130	Type: T Batch RPD 7 7	i: 1904 RP <u>Lim</u> 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-0	LCSD %Recovery 99 93			<b>Spike</b> <b>Added</b> 1000 1000 <u>Limits</u> 70 - 130		<b>Result</b> 894.9			Unit mg/Kg	ent S		<b>%Rec</b> 89 90	Prep 1           %Rec.           Limits           70 - 130           70 - 130	Type: T Batch RPD 7 7	tition to the second se
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-0 Matrix: Solid	LCSD %Recovery 99 93			<b>Spike</b> <b>Added</b> 1000 1000 <u>Limits</u> 70 - 130		<b>Result</b> 894.9			Unit mg/Kg	ent S		<b>%Rec</b> 89 90	Prep 1           %Rec.           Limits           70 - 130           70 - 130           70 - Prep 1	Type: T Batch RPD 7 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-0 Matrix: Solid	LCSD %Recovery 99 93 C MS	Qua	lifier _	Spike           Added           1000		Result 894.9 899.1	Qual		Unit mg/Kg	ent S		<b>%Rec</b> 89 90	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep 1 Prep 1	Type: T Batch RPD 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-C Matrix: Solid Analysis Batch: 19105	LCSD %Recovery 99 93 C MS Sample	<u>Qua</u>	lifier _	Spike           Added           1000		Result 894.9 899.1 MS	Qual	ifier	Unit mg/Kg mg/Kg	ent S	D	%Rec 89 90 Client S	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 %Rec.	Type: T Batch RPD 7 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-C Matrix: Solid Analysis Batch: 19105 Analyte	LCSD %Recovery 99 93 C MS Sample Result	Qual Sam Qual	lifier _	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           50           100           100           100           1000 <td></td> <td>Result           894.9           899.1           MS           Result</td> <td>Qual</td> <td>ifier</td> <td>Unit mg/Kg mg/Kg</td> <td>ent S</td> <td></td> <td>%Rec 89 90 Client S</td> <td>Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 -</td> <td>Type: T Batch RPD 7 7 7</td> <td>rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2</td>		Result           894.9           899.1           MS           Result	Qual	ifier	Unit mg/Kg mg/Kg	ent S		%Rec 89 90 Client S	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 -	Type: T Batch RPD 7 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-C Matrix: Solid Analysis Batch: 19105	LCSD %Recovery 99 93 C MS Sample	Qual Sam Qual	lifier _	Spike           Added           1000		Result 894.9 899.1 MS	Qual	ifier	Unit mg/Kg mg/Kg	ent S	D	%Rec 89 90 Client S	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 %Rec.	Type: T Batch RPD 7 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1924-A-9-C Matrix: Solid Analysis Batch: 19105 Analyte Gasoline Range Organics	LCSD %Recovery 99 93 C MS Sample Result	Qual Sam Qual U	lifier _	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           Limits           70 - 130           70 - 130           Spike           Added		Result           894.9           899.1           MS           Result	Qual	ifier	Unit mg/Kg mg/Kg	ent S	D	%Rec 89 90 Client S	Prep 1 Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 -	Type: T Batch RPD 7 7 7	rotal/N I: 1904 RP <u>Lim</u> 2 2 2 2 2 2 2

Lab Sample ID: 890-1924-A-9-C MS

Lab Sample ID: 890-1924-A-9-D MSD

# **QC Sample Results**

Limits

70 - 130

70 - 130

Spike

Added

998

998

Client: WSP USA Inc. Project/Site: RDX 17-6

Analysis Batch: 19105

Analysis Batch: 19105

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

Surrogate

o-Terphenyl

Analyte

C10-C28)

o-Terphenyl

1-Chlorooctane

Matrix: Solid

(GRO)-C6-C10

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

MS MS

68 S1-

Sample Sample

<49.9 U

<49.9 U

MSD MSD

82

Result Qualifier

%Recovery Qualifier

75

	1
Job ID: 890-1927-1 SDG: 31403360.01	2
Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 19049	4

1

	927-1	D: 890-1	Job II			
	860.01	: 314033	SDG			
	tal/NA	: Matrix Type: Tot Batch:		Client		
5	19049	Daten.	riep			
6						
7						
8	tal/NA	pike Dup Type: Tot Batch: <sup>/</sup>		ample IL	nt Sa	Cliei
0	RPD		%Rec.			
9	Limit	RPD	Limits	%Rec	D	
	20	2	70 - 130	97		
	20	3	70 - 130	89		
13						

Surrogate	%Recovery Q	ualifier	Limits						
1-Chlorooctane	77		70 - 130						
o-Terphenyl	68 S	1-	70 - 130						
Lab Sample ID: MB 880-19055/1	- <b>A</b>						Client Sa	mple ID: Metho	d Blank
Matrix: Solid								Prep Type: 1	Total/NA
Analysis Batch: 19245								Prep Batch	n: <b>19055</b>
	M	в мв							
Analyte	Resu	It Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50	0 U	50.0		mg/Kg		02/10/22 14:29	02/13/22 10:50	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50	0 U	50.0		mg/Kg		02/10/22 14:29	02/13/22 10:50	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50	0 U	50.0		mg/Kg		02/10/22 14:29	02/13/22 10:50	1
	М	B MB							
Surrogate	%Recove	y Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	;	'8	70 - 130				02/10/22 14:29	02/13/22 10:50	1

MSD MSD

989.0

917.3

Result Qualifier

Unit

mg/Kg

mg/Kg

02/10/22 14:29

Lab Sample ID: LCS 880-19055/2-A
Matrix: Solid
Analysis Batch: 19245

Analysis Batch: 19245							Prep I	Batch: 19055
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	968.2		mg/Kg		97	70 _ 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	939.3		mg/Kg		94	70 - 130	
C10-C28)								

70 - 130

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

**Client Sample ID: Lab Control Sample** 

02/13/22 10:50

Prep Type: Total/NA

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# **QC Sample Results**

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

Lab Sample ID: LCSD 880-1	9055/3-A					Cilei	it San		Lab Contro		
Matrix: Solid										Type: To	
Analysis Batch: 19245										Batch:	
			Spike	LCSD					%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics			1000	1021		mg/Kg		102	70 - 130	5	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1008		mg/Kg		101	70 - 130	7	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	106		70 - 130								
o-Terphenyl	114		70 - 130								
Lab Sample ID: 880-11152-A	A-21-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep T	Type: Tot	tal/N/
Analysis Batch: 19245									Prep	Batch:	1905
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U	1000	1053		mg/Kg		103	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	1000	883.9		mg/Kg		88	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	63	S1-	70 - 130								
		-									
o-Terphenyl	63	S1-	70 - 130								
o-Terphenyl	63	S1-	70 - 130								
		S1-	70 - 130			Cli	ent Sa	ample ID	): Matrix Sp	vike Dup	licate
Lab Sample ID: 880-11152-A		S1-	70 - 130			Cli	ent Sa	ample ID		oike Dup Type: Tot	
o- <i>Terphenyl</i> Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245		S1-	70 - 130			Cli	ent Sa	ample IC	Prep T		tal/N/
Lab Sample ID: 880-11152-A Matrix: Solid	A-21-D MSD	S1-	70 <u>-</u> 130 Spike	MSD	MSD	Cli	ent Sa	ample ID	Prep T	Type: To	tal/NA
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245	A-21-D MSD Sample				MSD Qualifier	Cli Unit	ent Sa	ample ID %Rec	Prep T Prep	Type: To	tal/N/ 1905 RPI
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 <sup>Analyte</sup>	A-21-D MSD Sample	Sample Qualifier	Spike						Prep T Prep %Rec.	Type: To Batch:	tal/N/ 1905 RPI Limi
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 Analyte Gasoline Range Organics	A-21-D MSD Sample Result	Sample Qualifier	Spike Added	Result		Unit		%Rec	Prep T Prep %Rec. Limits	Batch:	tal/N/ 1905 RPI Limi
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 Analyte Gasoline Range Organics (GRO)-C6-C10	A-21-D MSD Sample Result	Sample Qualifier U	Spike Added	Result		Unit		%Rec	Prep T Prep %Rec. Limits	Batch:	tal/N/ 1905 RPI Limi 2
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	A-21-D MSD Sample Result <50.0	Sample Qualifier U	Spike Added 998	Result 1045		Unit mg/Kg		%Rec 102	Prep T Prep %Rec. Limits 70 - 130	Type: Tot       Batch:       RPD       1	tal/N/ 1905 RPI Lim 2
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	A-21-D MSD Sample Result <50.0 <50.0	Sample Qualifier U	Spike Added 998	Result 1045		Unit mg/Kg		%Rec 102	Prep T Prep %Rec. Limits 70 - 130	Type: Tot       Batch:       RPD       1	tal/N/ 1905 RPI Lim 2
Lab Sample ID: 880-11152-A Matrix: Solid Analysis Batch: 19245 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	A-21-D MSD Sample Result <50.0 <50.0 MSD	Sample Qualifier U U	Spike Added 998 998	Result 1045		Unit mg/Kg		%Rec 102	Prep T Prep %Rec. Limits 70 - 130	Type: Tot       Batch:       RPD       1	tal/N/ 1905 RPI Limi 2
Lab Sample ID: 880-11152-A Matrix: Solid	A-21-D MSD Sample Result <50.0 <50.0	Sample Qualifier U U	Spike Added 998	Result 1045		Unit mg/Kg		%Rec 102	Prep T Prep %Rec. Limits 70 - 130	Type: Tot       Batch:       RPD       1	tal/N/ 1905

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19422/1-A Matrix: Solid Analysis Batch: 19575							Client S	ample ID: Metho Prep Type:	
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/19/22 08:32	1

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Client: WSP USA Inc.

Project/Site: RDX 17-6

#### Job ID: 890-1927-1 SDG: 31403360.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1942	2/2-A						Client	Sampl	e ID: Lab C		
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 19575			0	1.00					0/ D		
			Spike		LCS		_	a/ <b>B</b>	%Rec.		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Chloride			250	237.4		mg/Kg		95	90 - 110		
Lab Sample ID: LCSD 880-194	22/3-A					Clier	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid								·		Type: S	
Analysis Batch: 19575											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	237.5		mg/Kg		95	90 - 110	0	20
- Lab Sample ID: 890-1927-2 MS	5								Client Sar	nple ID:	<b>SW</b> 18
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 19575											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	5230	F1	4990	9457	F1	mg/Kg		85	90 - 110		
- Lab Sample ID: 890-1927-2 MS	SD								Client Sar	nple ID:	<b>SW</b> 18
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 19575											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	5230	F1	4990	9514	F1	mg/Kg		86	90 - 110	1	20

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6

4 5 6

#### Job ID: 890-1927-1 SDG: 31403360.01

**GC VOA** 

### Prep Batch: 19014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-1	SW17	Total/NA	Solid	5035	
890-1927-2	SW18	Total/NA	Solid	5035	
890-1927-3	SW19	Total/NA	Solid	5035	
890-1927-4	SW20	Total/NA	Solid	5035	
890-1927-5	SW21	Total/NA	Solid	5035	
890-1927-6	SW22	Total/NA	Solid	5035	
890-1927-7	SW23	Total/NA	Solid	5035	
MB 880-19014/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19014/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19014/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11145-A-11-A MS	Matrix Spike	Total/NA	Solid	5035	
880-11145-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 19116

890-1927-7	SW23	Iotal/NA	Solid	5035		
MB 880-19014/5-A	Method Blank	Total/NA	Solid	5035		8
LCS 880-19014/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-19014/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		9
880-11145-A-11-A MS	Matrix Spike	Total/NA	Solid	5035		
880-11145-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		10
Analysis Batch: 19116						4.4
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1927-1	SW17	Total/NA	Solid	8021B	19014	12
890-1927-2	SW18	Total/NA	Solid	8021B	19014	
890-1927-3	SW19	Total/NA	Solid	8021B	19014	4.0
890-1927-4	SW20	Total/NA	Solid	8021B	19014	13
890-1927-5	SW21	Total/NA	Solid	8021B	19014	
890-1927-6	SW22	Total/NA	Solid	8021B	19014	14
890-1927-7	SW23	Total/NA	Solid	8021B	19014	
MB 880-19014/5-A	Method Blank	Total/NA	Solid	8021B	19014	
LCS 880-19014/1-A	Lab Control Sample	Total/NA	Solid	8021B	19014	
LCSD 880-19014/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19014	
880-11145-A-11-A MS	Matrix Spike	Total/NA	Solid	8021B	19014	
880-11145-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19014	

#### Analysis Batch: 19350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-2	SW18	Total/NA	Solid	Total BTEX	
890-1927-3	SW19	Total/NA	Solid	Total BTEX	
890-1927-4	SW20	Total/NA	Solid	Total BTEX	
890-1927-5	SW21	Total/NA	Solid	Total BTEX	
890-1927-6	SW22	Total/NA	Solid	Total BTEX	
890-1927-7	SW23	Total/NA	Solid	Total BTEX	

#### Analysis Batch: 19367

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1927-1	SW17	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 18980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-5	SW21	Total/NA	Solid	8015B NM	19048
890-1927-6	SW22	Total/NA	Solid	8015B NM	19048
MB 880-19048/1-A	Method Blank	Total/NA	Solid	8015B NM	19048
LCS 880-19048/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19048
LCSD 880-19048/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19048
890-1919-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	19048

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# **QC** Association Summary

Client: WSP USA Inc. Project/Site: RDX 17-6

#### GC Semi VOA (Continued)

#### Analysis Batch: 18980 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
890-1919-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19048
ep Batch: 19048					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-1927-5	SW21	Total/NA	Solid	8015NM Prep	
390-1927-6	SW22	Total/NA	Solid	8015NM Prep	
VIB 880-19048/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
_CS 880-19048/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
_CSD 880-19048/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
390-1919-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1919-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
ep Batch: 19049					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
390-1927-1	SW17	Total/NA	Solid	8015NM Prep	
390-1927-2	SW18	Total/NA	Solid	8015NM Prep	
390-1927-3	SW19	Total/NA	Solid	8015NM Prep	
390-1927-4	SW20	Total/NA	Solid	8015NM Prep	
MB 880-19049/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
CS 880-19049/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
CSD 880-19049/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
90-1924-A-9-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
90-1924-A-9-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Lab Sample ID 890-1927-7	Client Sample ID SW23	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batc
MB 880-19055/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
.CS 880-19055/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
CSD 880-19055/3-A	Lab Control Sample Dup	Total/NA	Solid		
80-11152-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep 8015NM Prep	
880-11152-A-21-D MSD	Matrix Spike	Total/NA	Solid		
nalysis Batch: 19105		IotaimA	Solid	8015NM Prep	
-ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
90-1927-1	SW17	Total/NA	Solid	8015B NM	1904
90-1927-2	SW18	Total/NA	Solid	8015B NM	1904
90-1927-3	SW19	Total/NA	Solid	8015B NM	1904
90-1927-4	SW20	Total/NA	Solid	8015B NM	1904
//B 880-19049/1-A	Method Blank	Total/NA	Solid	8015B NM	1904
.CS 880-19049/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1904
.CSD 880-19049/3-A					1904
	Lab Control Sample Dup	Total/NA	Solid	8015B NM	
90-1924-A-9-C MS	Matrix Spike	Total/NA	Solid	8015B NM	1904
90-1924-A-9-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	1904
nalysis Batch: 19245					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-1927-7	SW23	Total/NA	Solid	8015B NM	1905
MB 880-19055/1-A	Method Blank	Total/NA	Solid	8015B NM	1905
LCS 880-19055/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1905

5

8

Job ID: 890-1927-1 SDG: 31403360.01

Eurofins Carlsbad

8015B NM

Lab Control Sample Dup

LCSD 880-19055/3-A

Total/NA

Solid

19055

Client: WSP USA Inc. Project/Site: RDX 17-6

#### GC Semi VOA (Continued)

#### Analysis Batch: 19245 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11152-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	19055
880-11152-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19055
Analysis Batch: 19504					

# Lab Sample ID<br/>890-1927-7Client Sample ID<br/>SW23Prep Type<br/>Total/NAMatrix<br/>SolidMethod<br/>8015 NMPrep Batch<br/>Prep Batch

#### Analysis Batch: 19741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-1	SW17	Total/NA	Solid	8015 NM	
890-1927-2	SW18	Total/NA	Solid	8015 NM	
890-1927-3	SW19	Total/NA	Solid	8015 NM	
890-1927-4	SW20	Total/NA	Solid	8015 NM	
890-1927-5	SW21	Total/NA	Solid	8015 NM	
890-1927-6	SW22	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 19422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-1	SW17	Soluble	Solid	DI Leach	
890-1927-2	SW18	Soluble	Solid	DI Leach	
890-1927-3	SW19	Soluble	Solid	DI Leach	
890-1927-4	SW20	Soluble	Solid	DI Leach	
890-1927-5	SW21	Soluble	Solid	DI Leach	
890-1927-6	SW22	Soluble	Solid	DI Leach	
890-1927-7	SW23	Soluble	Solid	DI Leach	
MB 880-19422/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19422/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19422/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1927-2 MS	SW18	Soluble	Solid	DI Leach	
890-1927-2 MSD	SW18	Soluble	Solid	DI Leach	

#### Analysis Batch: 19575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1927-1	SW17	Soluble	Solid	300.0	19422
890-1927-2	SW18	Soluble	Solid	300.0	19422
890-1927-3	SW19	Soluble	Solid	300.0	19422
890-1927-4	SW20	Soluble	Solid	300.0	19422
890-1927-5	SW21	Soluble	Solid	300.0	19422
890-1927-6	SW22	Soluble	Solid	300.0	19422
890-1927-7	SW23	Soluble	Solid	300.0	19422
MB 880-19422/1-A	Method Blank	Soluble	Solid	300.0	19422
LCS 880-19422/2-A	Lab Control Sample	Soluble	Solid	300.0	19422
LCSD 880-19422/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19422
890-1927-2 MS	SW18	Soluble	Solid	300.0	19422
890-1927-2 MSD	SW18	Soluble	Solid	300.0	19422

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Job ID: 890-1927-1 SDG: 31403360.01

### Client Sample ID: SW17 Date Collected: 02/09/22 09:20

Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 17:10	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19367	02/14/22 10:01	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19741	02/17/22 15:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19049	02/10/22 13:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19105	02/12/22 06:43	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19422	02/14/22 13:40	SC	XEN MID
Soluble	Analysis	300.0		20			19575	02/19/22 10:53	СН	XEN MID

# Lab Sample ID: 890-1927-2

Lab Sample ID: 890-1927-3

Lab Sample ID: 890-1927-4

Matrix: Solid

Matrix: Solid

#### Client Sample ID: SW18 Date Collected: 02/09/22 09:26

Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 17:30	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19350	02/14/22 09:43	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19741	02/17/22 15:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19049	02/10/22 13:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19105	02/12/22 07:04	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19422	02/14/22 13:40	SC	XEN MID
Soluble	Analysis	300.0		20			19575	02/19/22 11:02	CH	XEN MID

### Client Sample ID: SW19

# Date Collected: 02/09/22 09:35

#### Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 17:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19350	02/14/22 09:43	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19741	02/17/22 15:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19049	02/10/22 13:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19105	02/12/22 07:26	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19422	02/14/22 13:40	SC	XEN MID
Soluble	Analysis	300.0		20			19575	02/19/22 11:29	CH	XEN MID

#### Client Sample ID: SW20 Date Collected: 02/09/22 09:38 Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 18:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19350	02/14/22 09:43	KL	XEN MID

Eurofins Carlsbad

Matrix: Solid

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Job ID: 890-1927-1 SDG: 31403360.01

# Lab Sample ID: 890-1927-1 Matrix: Solid

> 9 10 11

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# Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6

# Client Sample ID: SW20

Date Collected: 02/09/22 09:38 Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19741	02/17/22 15:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19049	02/10/22 13:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19105	02/12/22 07:48	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19422	02/14/22 13:40	SC	XEN MID
Soluble	Analysis	300.0		20			19575	02/19/22 11:37	СН	XEN MID

#### Client Sample ID: SW21 Date Collected: 02/09/22 09:42

# Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 18:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19350	02/14/22 09:43	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19741	02/17/22 15:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19048	02/10/22 13:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18980	02/11/22 02:47	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19422	02/14/22 13:40	SC	XEN MID
Soluble	Analysis	300.0		20			19575	02/19/22 12:04	CH	XEN MID

#### Client Sample ID: SW22

Date Collected: 02/09/22 09:45 Date Received: 02/09/22 13:11

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.98 g 5 mL 19014 02/11/22 07:30 KL XEN MID Total/NA 8021B 5 mL 5 mL 19116 02/11/22 18:52 KL XEN MID Analysis 1 Total BTEX Total/NA Analysis 1 19350 02/14/22 09:43 KL XEN MID Total/NA Analysis 8015 NM 19741 02/17/22 15:56 AJ XEN MID 1 02/10/22 13:28 Total/NA Prep 8015NM Prep 10.00 g 10 mL 19048 DM XEN MID Total/NA Analysis 8015B NM 18980 02/11/22 03:09 A.I XEN MID 1 Soluble Leach DI Leach 4.95 g 50 mL 19422 02/14/22 13:40 SC XEN MID Soluble Analysis 300.0 50 19575 02/19/22 12:13 СН XEN MID

# Client Sample ID: SW23

#### Date Collected: 02/09/22 09:47 Date Received: 02/09/22 13:11

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	19014	02/11/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19116	02/11/22 19:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19350	02/14/22 09:43	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19504	02/15/22 13:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19055	02/10/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19245	02/13/22 17:05	AJ	XEN MID

Eurofins Carlsbad

Job ID: 890-1927-1 SDG: 31403360.01 2 Lab Sample ID: 890-1927-4 Matrix: Solid 4 Prepared or Analyzed Analyst Lab 5

# Lab Sample ID: 890-1927-6

Lab Sample ID: 890-1927-7

Lab Sample ID: 890-1927-5

Matrix: Solid

Matrix: Solid

Matrix: Solid

# Lab Chronicle

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1927-1 SDG: 31403360.01

#### Client Sample ID: SW23 Date Collected: 02/09/22 09:47

Date Received: 02/09/22 13:11

	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	5
Soluble	Leach	DI Leach			4.99 g	50 mL	19422	02/14/22 13:40	SC	XEN MID	
Soluble	Analysis	300.0		10			19575	02/19/22 12:22	СН	XEN MID	

#### Laboratory References:

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

# Lab Sample ID: 890-1927-7 Matrix: Solid

Eurofins Carlsbad

Laboratory: Eurofins Midland

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

thority	Pi	ogram	Identification Number	Expiration Date
as	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report by	it the laboratory is not certif	ed by the governing authority. This list ma	av include analytes for wh
the agency does not o	fer certification.	-		
the agency does not o Analysis Method	•	Matrix	Analyte	
the agency does not o	fer certification.	-		

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Job ID: 890-1927-1

SDG: 31403360.01

Eurofins Carlsbad

# **Method Summary**

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1927-1 SDG: 31403360.01

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

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

Client: WSP USA Inc. Project/Site: RDX 17-6 Job ID: 890-1927-1 SDG: 31403360.01

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
0-1927-1	SW17	Solid	02/09/22 09:20	02/09/22 13:11	0 - 4	
0-1927-2	SW18	Solid	02/09/22 09:26	02/09/22 13:11	0 - 4	
0-1927-3	SW19	Solid	02/09/22 09:35	02/09/22 13:11	0 - 4	
00-1927-4	SW20	Solid	02/09/22 09:38	02/09/22 13:11	0 - 4	
0-1927-5	SW21	Solid	02/09/22 09:42	02/09/22 13:11	0 - 4	
0-1927-6	SW22	Solid	02/09/22 09:45	02/09/22 13:11	0 - 4	
0-1927-7	SW23	Solid	02/09/22 09:47	02/09/22 13:11	0 - 4	
						- 1
						- 1

Revised Date 051418 Rev 2018			0				5
			4	c	(	M M	α V
(Signature)	Heceived by: (Signature)	Relinquished by: (Signature)	Date/Time	(Signature)	Received by: (S	gnature)	Relinquished by: (Signature)
				in of the lot participation of the lot	acit project and a citat	I \$12.00 Milli be applied to a	la veiror. A minimum cuelle à scoro am e ebbier ro eeus broler: ence e cuelle, or eo co eeus
	s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously neoptiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. its affiliates and suchontactors. It assigns standard terms and conditions of a service Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client it such onservice the to circuments by both the contro of samples and shall be control to the control of the control of the control of the cost of samples and shall be control of the control of the cost of samples and shall be control of the cost of samples and shall be control of the cost of th	nature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractor 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 a minimum character of star for will be considered a base of star and a series enhance without a star of the series and shall not assume any response of the client is unclease three terms will be	alid purchase order from cl any responsibility for any lo	amples constitutes a sand shall not assume	nent and relinquishment of some only for the cost of samples	Notice: Signature of this docu of service. Xenco will be liable
1631 / 245.1 / /4/0 / /4/1 : Hg	Ag TI U	Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	RA Sb As Ba Be Cd Cr	TCLP / SPLP 6010: 8RCRA	alyzed TCL	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s)
SiO2	li K Se Ag	Ca Cr Co (	Al Sb As Ba Be	13PPM Tex	8RCRA	200.8 / 6020:	Total 200.7 / 6010
				+			CZ MAC
Composite	-		< <	-+		0	CIMIS
Composite			×			S	SW22
Composite			1 x x x	9:42 0-4'		S	SW21
Composite			1 x x x	9:38 0-4'	2/9/2022 9	S	SW20
Composite			1 x x x	9:35 0-4'		S	SW19
Composite			1 X X X	9:26 0-4'		S	SW18
Composite			1 × × ×	9:20 0-4'	2/9/2022 9	S	SW17
Sample Comments			Numb TPH (E BTEX ( Chloric	Time Depth Sampled	Date T Sampled San	ation Matrix	Sample Identification
tab, if received by 4:30pm			PA 8 EPA	ainers:	Total Containers:	Yes No N/A	Sample Custody Seals:
TAT starts the day receiied by the	-	-	015) 802	actor: 0.2	Correction Factor:	Yes No MA	Cooler Custody Seals:
	Custody	890-1927 Chain of Custody	) 1)	100	TWN	Yes No	Received Intact:
				Thermometer ID	Therm	1.6/1.6	Temperature (°C):
			3	Wet Ice: Yes No	Yes No M		SAMPLE RECEIPT
AFE:				Due Date:	sey	Travis Casey	Sampler's Name:
CC: 1061137001				Rush:	8894	nRM0019548894	P.O. Number:
Ĩ				Routine X	.01	31403360.01	Project Number:
Work Order Notes		ANALYSIS REQUEST		Turn Around	6	RDX 17-6	Project Name:
ADaPT Other:	Deliverables: EDD	moir@ws	travis.casey@wsp.com, kalei.jennings@wsp.com, dan.	Email: travis.casey@		781-702-2329	Phone: 78
	Reporting:Level II Level III	Repo	Carlsbad NM, 88220	City, State ZIP:		Midland, TX 79705	City, State ZIP: Mi
	8	S	5315 Buena Vista Dr.	Address:	Unit 222	3300 North A St. Bldg 1, Unit 222	
Brownfields RAC Superfund D	-	Prog	WPX Energy	Company Name:	office	WSP USA Inc., Permian office	
Work Order Comments			Jim Raley	Bill to: (if different)		Joseph Hernandez	Project Manager: Jo:
www.xenco.com Page 1 of		Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	2 (480-355-0900) Atlanta,GA (7	75-392-7550) Phoenix,AJ	Hobbs,NM (	ORATORIES	LAE
-		an Antonio,TX (210) 509-3334 Lubback TX (806)794-1296	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland TX (429-704-5440) EL Bash TX (015)585-3443 Lubbock TX (006)794-1296	Houston, TX (281) 240-420			X
Work Order No:	Work O	stody	Chain of Custody				

Job Number: 890-1927-1 SDG Number: 31403360.01

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1927 List Number: 1 Creator: Clifton, Cloe

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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Job Number: 890-1927-1 SDG Number: 31403360.01

List Source: Eurofins Midland

List Creation: 02/10/22 12:21 PM

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1927 List Number: 2 Creator: Rodriguez, Leticia

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	N/A	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").



# APPENDIX F

**Correspondence Emails** 

### Moreno, Gilbert

From: Sent: To: Subject: Byers, Anna Wednesday, March 9, 2022 9:31 AM Moreno, Gilbert FW: Final Sampling Notification December 9th through 10th, 2021

#### Anna Byers

Consultant, Geologist Office + 1 575-887-0101 Mobile + 1 575-200-6754



From: Byers, Anna
Sent: Tuesday, December 7, 2021 6:41 AM
To: ocd.enviro@state.nm.us
Cc: Raley, Jim <Jim.Raley@dvn.com>; Casey, Travis <Travis.Casey@wsp.com>; Hernandez, Joseph <Joe.Hernandez@wsp.com>
Subject: Final Sampling Notification December 9th through 10th, 2021

Good morning,

WPX anticipates completing final sampling activities at the following site during Dec 9th through 10th, 2021:

#### <u>WSP</u>

Site: RDX 17 Federal Com #006H API: 30-015-39308 Incident ID: NRM2019548894 Release Date: 07/05/2020

Thank you,

Anna Byers Consultant, Geologist Please note the new email address.

# vsp

Email: <u>anna.byers@wsp.com</u> Office: + 1 575-887-0101 Mobile: + 1 575-200-6754

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220

wsp.com

### Moreno, Gilbert

From: Sent: To: Subject: Byers, Anna Wednesday, March 9, 2022 9:31 AM Moreno, Gilbert FW: Final Sampling Notification for Week Ending December 17th, 2021

#### Anna Byers

Consultant, Geologist Office + 1 575-887-0101 Mobile + 1 575-200-6754



From: Byers, Anna
Sent: Friday, December 10, 2021 4:22 PM
To: ocd.enviro@state.nm.us
Cc: Raley, Jim <Jim.Raley@dvn.com>; Hernandez, Joseph <Joe.Hernandez@wsp.com>
Subject: Final Sampling Notification for Week Ending December 17th, 2021

Good afternoon,

WPX anticipates completing final sampling activities at the following sites during next week:

#### Dec 14th through 17th, 2021

#### <u>WSP</u>

Site: RDX 17 Federal Com #006H API: 30-015-39308 Incident ID: NRM2019548894 Release Date: 07/05/2020

Site: RDX Federal Com 17 #026H API: 30-015-42752 Incident ID: napp2134444397 Release Date: 12/07/2021

Thank you,

Anna Byers Consultant, Geologist Please note the new email address.

# vsp

Email: <u>anna.byers@wsp.com</u> Office: + 1 575-887-0101 Mobile: + 1 575-200-6754

WSP USA

1

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508 West Stevens Street Carlsbad, New Mexico 88220

wsp.com

# Moreno, Gilbert

From: Sent: To: Subject: Byers, Anna Wednesday, March 9, 2022 9:30 AM Moreno, Gilbert FW: Final Sampling Notification through Week Ending January 14, 2021

#### Anna Byers

Consultant, Geologist Office + 1 575-887-0101 Mobile + 1 575-200-6754



From: Byers, Anna <Anna.Byers@wsp.com>
Sent: Tuesday, January 4, 2022 6:58 AM
To: ocd.enviro@state.nm.us
Cc: Hernandez, Joseph <Joe.Hernandez@wsp.com>; Raley, Jim <Jim.Raley@dvn.com>
Subject: Final Sampling Notification through Week Ending January 14, 2021

Good morning,

WPX anticipates completing final sampling activities at the following site during Jan 6th through 14th, 2021:

#### <u>WSP</u>

Site: RDX 17 Federal Com #006H API: 30-015-39308 Incident ID: NRM2019548894 Release Date: 07/05/2020

Thank you, Anna

Get Outlook for iOS

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

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

District III

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

District IV

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

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

CONDITIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	151388
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	App ID 151388: Remediation addendum approved. Please include BLM approval in final report. Remediation due date updated to 04/25/2024.	1/26/2024

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

)

Incident ID	NRM2019548894
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289	
Contact Name: Lynda Laumbach	Contact Telephone: (575) 725-1647	
Contact email: Lynda.Laumbach@wpxenergy.com     Incident # (assigned by OCD)		
Contact mailing address: 5315 Buena Vista Drive, Carlsbad, NM 88	3220	

# **Location of Release Source**

Latitude 32.041235

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

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

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

Surface Owner: State X 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):	Volume Recovered (bbls):
X Produced Water	Volume Released (bbls): 35	Volume Recovered (bbls): 5
	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:

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

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

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III C-141		Incident ID	NRM2019548894	
age 2 Oil Conservation Division	District RP			
		Facility ID		
		Application ID		
			·	
Was this a major release as defined by 19.15.29.7(A) NMAC? X Yes No	If YES, for what reason(s) does the responsible par Release was over 25bbl of fluid.	ty consider this a major release?	,	
	otice given to the OCD? By whom? To whom? When to the OCD? By whom? To whom? When to Mike Bratcher, Robert Hamlet, Victoria Venega			

# **Initial Response**

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

 $\overline{\mathbf{X}}$  The source of the release has been stopped.

 $\mathbf{X}$  The impacted area has been secured to protect human health and the environment.

X Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

X All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Lynda Laumbach	Title:Environmental Specialist	
Signature: Jorda Sombach	Date: 07/06/2020	
email: Lynda.Laumbach@wpxenergy.com Telephone: (575)725-1647		
OCD Only		
Received by: <u>Ramona Marcus</u>	Date:	

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Incident ID	NRM2019548894
District RP	
Facility ID	
Application ID	

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	Yes X 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 X 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 X No
Are the lateral extents of the release overlying a subsurface mine?	Yes X 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 <b>not</b> 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.

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

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			Incident ID	NRM201954889
Page 4 Oil Conservation	Oil Conservation D	Division	District RP	
			Facility ID	
			Application ID	
regulations all operators ar public health or the enviro failed to adequately investi	tombach	elease notifications and perform on ort by the OCD does not relieve the pose a threat to groundwater, sur	corrective actions for rel- ne operator of liability sh face water, human health pliance with any other fe nental Specialist	eases which may endanger rould their operations have a or the environment. In
OCD Only Received by: Cristin	a Eads	Date:0	4/19/2021	

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X Detailed description of proposed remediation technique

Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

Incident ID	NRM201954889
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

X Scaled sitemap with GPS coordinates showing delineation points X Estimated volume of material to be remediated X Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC X Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Lynda Laumbach Title: Environmental Specialist Signature: Date: 03/23/2021 Telephone: (575)725-1647 email: Lynda.Laumbach@wpxenergy.com **OCD Only** Cristina Eads Date: 04/19/2021 Received by: Approved Approved with Attached Conditions of Approval Denied Deferral Approved 07/21/2021 Signature: Date:

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

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

Mr. Bratcher,

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

Well Location: RDX 17 Federal Com #006H API #: 30-015-39308 NMOCD Reference #: NRM2019548894 Site Location Description: Unit Letter J, Section 17, Township 26S, Range 30E Release Latitude/Longitude: N32.041235, W103.9018005 Land Jurisdiction: Federal Estimated Depth to Groundwater: >100 feet

#### **NMOCD Site Characterization Standards**

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

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

#### **Field Activities**

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

5315 Buena Vista Dr. | Carlsbad, NM 88220 | 575.725.1647 Tel | 575.885.3509 Fax | www.wpxenergy.com

### **Sampling Activities**

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

#### Laboratory Analytical Results

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

### **Proposed Workplan**

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

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

### **Proposed Schedule**

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

Best regards,

Inde tomback

Lynda Laumbach Environmental Specialist

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

Attachments:

Figure 01 Topography Figure 02 Delineation Samples Figure 03 Remediation Plan Table 01 Soil Sample Results Attachment 01 Water Well Data Attachment 02 Analytical Results

# Figures




### Legend

X Point of Release

Release Extent (8,785 sq. feet)

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

32.041235, -103.9018005

WPXENERGY.



IMAGE COURTESY OF GOOGLE EARTH 2019

LegendFigure 03X Point of Release30-015-39308Release Extent (8,785 sq. feet)NRM2019548894Additional Area (2,966 sq. feet)32.041235, -103.9018005

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# Tables

Released to Imaging: 8/28/2024 3:46:21 PM

TABLE 1

#### SOIL SAMPLE ANALYTICAL RESULTS

#### RDX 17 Federal #006H NMOCD REFERENCE NUMBER: NRM2019548894



Sample Name	Depth (ft bgs)	Sample Date	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	GRO + DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/k
DS01	2	7/16/2020	-	-	-	-	-	-	-	8340
DS01A	4	7/16/2020	-	-	-	-	-	-	-	723
DS02	2	7/16/2020	-	-	-	-	-	-	-	4700
DS02A	4	7/16/2020	-	-	-	-	-	-	-	1430
DS03	2	7/16/2020	-	-	-	-	-	-	-	26700
DS03A	4	7/16/2020	-	-	-	-	-	-	-	30900
DS03B	6	7/16/2020	-	-	-	-	-	-	-	32700
DS03C	8	7/16/2020	-	-	-	-	-	-	-	27200
DS03D	10	7/16/2020	-	-	-	-	-	-	-	28400
DS04	2	7/16/2020	-	-	-	-	-	-	-	26900
DS04A	4	7/16/2020	-	-	-	-	-	-	-	23500
DS04B	6	7/16/2020	-	-	-	-	-	-	-	13800
DS04C	10	7/16/2020	-	-	-	-	-	-	-	16000
DS05	2	7/16/2020	-	-	-	-	-	-	-	26000
DS05A	4	7/16/2020	-	-	-	-	-	-	-	24300
DS05B	6	7/16/2020	-	-	-	-	-	-	-	24800
DS05C	10	7/16/2020	-	-	-	-	-	-	-	24500
DS06	2	7/16/2020	-	-	-	-	-	-	-	18800
DS06A	4	7/16/2020	-	-	-	-	-	-	-	34600
DS06B	6	7/16/2020	-	-	-	-	-	-	-	37900
DS06C	10	7/16/2020	-	-	-	-	-	-	-	28400
DS07	2	7/16/2020	-	-	<49.8	<49.8	<49.8	-	-	26300
DS07A	4	7/16/2020	_	-	<49.9	<49.9	<49.9	-	-	22500
DS07B	6	7/16/2020	_	-	-	-	-	-	-	23100
DS07C	10	7/16/2020	-	-	-	-	-	-	-	23800
	0.5	3/16/2021						-		
SS01 SS02	0.5	3/16/2021	-	-		-	-		_	379
SS02 SS03	0.5	3/16/2021	-	-	-	-	-	-	-	440 57.8
SS05 SS04			-	-	-	-	-	-	-	57.8 888
	0.5	3/16/2021	-	-	-	-	-	-	-	
SS05	0.5	3/16/2021	-	-	-	-	-	-	-	1060
SS06	0.5	3/16/2021	-	-	-	-	-	-	-	273
SS07	0.5	3/16/2021	-	-	-	-	-	-	-	518
SS08	0.5	3/16/2021	-	-	-	-	-	-	-	707
SS09	0.5	3/16/2021	-	-	-	-	-	-	-	125
SS10	0.5	3/16/2021	-	-	-	-	-	-	-	347
SS11	0.5	3/16/2021	-	-	-	-	-	-	-	368
SS12	0.5	3/16/2021	-	-	-	-	-	-	-	1350
			-	-	-	-	-	-	-	
1OCD Table 1 Clo	sure Criteria		10	50	NE	NE	NE	1000	2500	20000
erence:	BTEX: benzene, tolu GRO: gasoline range		nd total xylenes			mg/kg: milligrams p NMOCD: New Mexic	er kilogram co Oil Conservation D	ivision		

TPH: total petroleum hydrocarbons

DRO: diesel range organics

ft bgs: feet below ground surface

NMOCD Table 1 Closure Criteria: NMAC 19.15.29 August 2018 criteria for soils impacted based on characterization

# Attachment 01: Water Well Data

Project No:



Site Activities

0397

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

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

#### Conclusions

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

Respectfully,

K. Williams

Kris Williams, CHMM, REM Operations Manager

Attached: Drilling Locations Maps Soil Boring Logs





	HRL								MONITORING W	ELL COMPLETION	N DIAG	RAM
		0.0	MPI	1 A N	C F		Boring/Wel		W-1	Location: RDX 16	-25	
		S O	1 11 1		NS		Date:			Client:		
Drilling Me	- 41	00	Construction 2	A set of			LessedDe		0/2020	WPX En	ergy	
	Air Rotai	v	Sampling 1		one		Logged By:		nn, PG	Talon L	PE	
Gravel Pacl	k Type:		Gravel Pac	ck Depth Inte			Seal Type:		Seal Depth Interval:	Latitude:	12	
	0/20 sar				ags			lone	None	32.0399	004	
Casing Typ PVC	be:	Diameter: 2-inch		Depth Inter 0-105 fe			Boring Total Depth (ft. BGS): 110			Longitude: -103.8832	7760	
Screen Typ	e:	Slot:		Diameter:		Interval:					DTW Date	:
PVC		0.010 <b>-</b> ir	nch	2-inch		110 ft				> 110	12/16/	/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)				y/Remarks	Wo Comp	
0 5 10 15 20	NM	L	D	N	N	NM	SW	NS		nk tan well graded vith silt	-	
25 30 35	NM	L	D	N	N	NM	SP	NS		poorly graded fine		
40 45	NM	L	D	N	N	NM	SW	NS		d well graded sand gravel		
50 55	NM	L	D	N	Ν	NM	SP	NS		poorly graded fine		
60 65 70 75 80 85 90 95 100 105 110	NM	L	D	N	N	NM	SP	P NS sand with mino		poorly graded fine medium and coarse D: 110' bgs		

		HR	1	110	1				MONITORING W	ELL COMPLETION	N DIAGRAM
		0.0	MPL	IAN	C F		Boring/Wel		W-1	Location: RDX 17	' #3
		S O	LUI	101	NS		Date:			Client:	
Drilling Me	ethod:		Sampling N	Method:			Logged By:		3/2020	WPX En Drilled By:	ergy
A	Air Rotai	у		No	one				nn, PG	Talon L	PE
Gravel Paci	к Туре: 0/20 Sar	nd	Gravel Pac	k Depth Inte 3 B	erval: bags		Seal Type:	lone	Seal Depth Interval: None	Latitude: 32.0367	165
Casing Typ		Diameter:		Depth Inter				al Depth (ft. BC		Longitude:	05
PVC		2-inch		0-102 fe Diameter:		r / 1	W 11 T . 1		07	-103.895	
Screen Typ PVC	be:	Slot: 0.010-ii	nch	2-inch		Interval: 107 ft	Well Total	Depth (ft. BGS)	): 0 <b>7</b>	Depth to Water (ft. BTOC): $> 107$	12/16/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Litholog	y/Remarks	Well Completion
0 5 10 15 20 25	• NM	L	D	N	N	NM	SP	NS	Pale orange poor	Iy graded fine sand	-
30 35	NM	L	D	N	N	NM	SP	NS		th slight increase in d and gravel	+
40 45 50	NM	L	D	N	N	NM	SP	NS		ly graded fine sand v slight silt	- -
55	NM	L	D	N	N	NM	SP	NS	Pale orange poor	ly graded fine sand	†
60	NM	L	D	N	N	NM	SW	NS	Pale orange well	l graded fine sand	†
65 70 75 80 85	NM	М	SL M	N	N	NM	SM	NS	-	ayey silty fine sand	
90 95 100 105	NM	L	SL M	N	N	NM	SP	NS		y sorted fine sand - 7' BGS	- -

	HRL								MONITORING WI	ELL COMPLETION	DIAGRAM
		0.0	MPI	1 A N	C F		Boring/Well		W-1	Location: RDX Federal Co	om 17 <b>-</b> 44H
		S O	1 11	T I O I	NS		Date:			Client:	
	-	00	LU				1.1.5	12/8	/2020	WPX End	ergy
Drilling Me	ethod: Air Rotar	v	Sampling 1		one		Logged By:	J. Lir	ın, PG	Drilled By: Talon L	PE
Gravel Pac		2	Gravel Pac	ck Depth Inte			Seal Type:		Seal Depth Interval:	Latitude:	
	0/20 Sar			3 B	lags			one	None	32.0496	56
Casing Typ PVC	be:	Diameter: 2-inch		Depth Inter 0-105 ft			Boring Total	Depth (ft. BGS	): 10	Longitude: -103.904	054
Screen Typ	e:	Slot:		Diameter:		Interval:	Well Total D	epth (ft. BGS):			DTW Date:
PVC		0.010-iı	nch	2-inch	105 -	110 ft		1	10	> 110	12/16/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Litholog	v/Remarks	Well Completion
$ \begin{array}{r} 0 \\ 5 \\ 10 \\ 15 \\ 20 \\ 25 \\ 30 \\ 35 \\ 40 \\ \end{array} $	NM	L	D	N	Ν	NM	CE	NS	Buff to pale pin	k colored caliche	
45 50 55 60	NM	L	D	N	N	NM	SW	NS		l graded sand with or silt	-
65 70 75	NM	L	D	N	N	NM	SP	NS		range poorly graded - th minor silt -	
80 85 90	NM	L	D	N	N	NM	SW-SM SW-SC	NS		ge well-graded sand - and clay -	
95 100 105	NM	L	D	N	N	NM	NM SP NS Pinky pale brow			range poorly graded <sup>-</sup> or silt - TD: 110' bgs -	

	HRL								MONITORING W	ELL COMPLETIO	N DIAGR	AM
		0.0	MPL	1 A N	C F		Boring/We		W-1	Location: RDX Federal C	Com 21 <b>-</b> 43	3
		S D	1 11 1		NS		Date:			Client:		, 
	-	00	LU						9/2020	WPX En	ergy	
Drilling Me	ethod: Air Rotai	<b>N</b>	Sampling 1		one		Logged By		ın, P.G.	Drilled By: Talon L	ÞF	
Gravel Pack		5	Gravel Pac	k Depth Inte			Seal Type:	<b>J.</b> L11	Seal Depth Interval:	Latitude:	112	
	0/20 Sar	nd		3 E	Bags		N	lone	None	32.0225	571	
Casing Typ	be:	Diameter:		Depth Inter			Boring Total Depth (ft. BGS): 110			Longitude:		
PVC		2-inch		0-100 fe Diameter:	eet bgs	Interval:	val: Well Total Denth (ft BGS):			-103.884	371 DTW Date:	
Screen Typ PVC	e:	Slot: 0.010-i1	nch	2-inch		105 ft				Depth to Water (ft. BTOC): $> 105$	12/16/2	2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)				y/Remarks	We Comple	
0 5 10 15	NM	L	D	N	N	NM				poorly graded fine	-	
20	NM	Н	D	N	N	NM	CL	NS		le red clay, dry, with and minor caliche		
25 30 35 40 45	NM	L	D	N	N	NM	SP	NS		e red poorly graded sand	- - -	
50 55 60	NM	L	D	N	N	NM	SP	NS		orly graded fine sand silt and clay		
65 70 75	NM	L	D	N	N	NM	SP	NS		e red poorly graded		
80 85 90	NM	М	D	N	N	NM	MM SC NS medium			olor fine sand with		
95	NM	Н	D	N	N	NM	CL	NS	Brown orange clay w	ith silt and fine sand	ŢΙ	
100 105	NM	Н	D	N	N	NM	Golden yellov			buff colored clay with g: 110' BGS; Sand 110' • • ' BGS	+	

>	HRL COMPLIANCE							ll Number:	MONITORING W W-1	ELL COMPLETIO	
		SO			NS		Date:		8/2020	Client: WPX En	
Drilling Me	ethod:		Sampling 1	Method:			Logged By:		5/2020	Drilled By:	eigy
-	Air Rotai	у			one		,		nn, PG	Talon L	PE
Gravel Pac			Gravel Pac	k Depth Inte			Seal Type:	_	Seal Depth Interval:	Latitude:	
l Casing Typ	0/20 Sar	1d Diameter:		3 B Depth Inter				lone al Depth (ft. BC	None	32.0303	500
	VC	2-inch		0-100 fe			Bornig Tota		05	-103.871	338
Screen Typ		Slot:		Diameter:	Depth	Interval:	Well Total	Depth (ft. BGS			DTW Date:
PV	VC	0.010-ii	nch	2-inch	100-	105 ft		1(	05	> 105	12/16/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	NSCS	Sample ID	Litholog	y/Remarks	Well Completion
0 5 10 15	NM	L	D	N	N	NM	SW	NS	fine sand with m	bink to buff colored in the second se	- - -
20 25 30	NM	L	D	N	N	NM	SP	NS		pink poorly graded	
35           40           45           50           55           60           65	NM	L	D	N	N	NM	SP	NS		pale orange poorly fine sand	
70 75 80 85 90 95	NM	L	D	N	N	NM	SP	SP NS		poorly graded fine	
100	NM	L	D	N	N	NM	SP	NS	Tan/pale brown/pal graded fine sand - 7		

COMPLIANCE							BORI Boring/Wel	ll Number:		ELL COMPLETION	
		U U	MPL	IAN	U E		Date:	М	W-1	Ross Draw U	Jnit #55
	14	20	LU		N 2		Date.	12/9	0/2020	WPX End	ergy
Drilling Me			Sampling N				Logged By:		nn DC	Drilled By:	DE
A Gravel Pack	ir Rotar	y	Gravel Pac	NC k Depth Inte	one erval:		Seal Type:	J. LII	nn, PG Seal Depth Interval:	Talon L	PE
	0/20 Sar			3 E	Bags		N	lone	None	32.0161	65
Casing Typ PVC	e:	Diameter: 2-inch		Depth Inter			Boring Tota	al Depth (ft. BC		Longitude:	246
Screen Type	e:	Slot:		0-101'7 Diameter:		Interval:	Well Total	Depth (ft. BGS	5'7" ):	-103.863 Depth to Water (ft. BTOC):	DTW Date:
PVC	0.010-inch 2-inch 101'7" - 106'				- 106'7"			5'7"	>106' 7"	12/16/2020	
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	NSCS	Sample ID	Litholog	y/Remarks	Well Completion
0 5 10 15	NM	L	D	N	N	NM	SP	NS	-	blored poorly graded	-
20 25 30	NM	L	D	N	N	NM	SW	NS	-	ell graded fine sand in and coarse sand	+ + -
35           40           45           50           55           60	NM	L	D	N	N	NM	SP	NS	-	n poorly graded fine ninor gravel	
65 70 75 80 85	NM	L	D	N	N	NM	SP	NS		ded fine sand with • gravel	
90 95	NM	L	D	N	N	NM			ly graded fine sand minor medium sand		
100 106'7"	NM	М	D	N	N	NM	SC	NS		d with moderate silt TD 106'7"	-

		HR	L	1.1.1	10		BORI Boring/Wel		MONITORING W	ELL COMPLETION	N DIAGRAM
		CO	MPL	IAN	CE		Boring/ wei		W-1	Ross Draw U	Jnit #57
	14	S O	LUI	017	N S		Date:	12/9	0/2020	Client: WPX End	erov
Drilling Me	ethod:		Sampling N	Method:			Logged By:		/2020	Drilled By:	ugy
	Air Rotar	у			one			J. Li	nn, PG	Talon L	PE
Gravel Pacl	к Туре: 0/20 Sar	d	Gravel Pac	k Depth Inte	erval: Bags		Seal Type:	lone	Seal Depth Interval: None	Latitude: 32.010.	20
Casing Typ		Diameter:		Depth Inter				al Depth (ft. BC		Longitude:	52
PVC		2-inch		0-105 f					10	-103.872	
Screen Typ PVC	ie:	Slot: 0.010-ii	nch	Diameter: 2-inch		Interval: 110 ft	Well Total	Depth (ft. BGS	): 10	Depth to Water (ft. BTOC): $> 110$	DTW Date: 12/16/2020
		0.010-11								> 110	12/10/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Litholog	y/Remarks	Well Completion
$ \begin{array}{c} 0 \\ 5 \\ 10 \\ 15 \\ 20 \\ 25 \\ 30 \\ 35 \\ \end{array} $	NM	L/M	D	N	N	NM	SM	NS		pale brown poorly fine sand	
40 45	NM	М	D	N	Ν	NM	SW	NS		k orange well graded	
50 55	NM	М	D	N	Ν	NM	SM	NS	Pale orange red	tan silty fine sand	-
60 65	NM	L	D	N	N	NM	SW	NS	Dark brown greyis	sh well graded sand	
70 75 80 85 90 95	NM	L/M	D to SL M	N	N	NM	SW	W NS Grey we		graded sand	
100 105	NM	L/M	D	N	Ν	NM	SM	NS		pale brown poorly nd - TD 110' bgs	-

>	HRL COMPLIANCE SOLUTIONS							l Number: M	W-1	ELL COMPLETIO! Location: North Brushy Fede Client: WBX En	eral 35 # 010H
Drilling Me	ethod:		Sampling N	/lethod:			Logged By:		3/2020	WPX En	ergy
0	Air Rotar	у			one				nn, PG	Talon L	PE
Gravel Pac		1	Gravel Pac	k Depth Inte			Seal Type:	r	Seal Depth Interval:	Latitude:	
Casing Typ	0/20 San	1d Diameter:		3 B Depth Inter	ags			lone al Depth (ft. BC	None	32.0799	09
PVC	Je.	2-inch		0-100 fe			Boring 100		)5	-103.951	386
Screen Typ	e:	Slot: Diameter: Depth Interval				Well Total	Depth (ft. BGS		Depth to Water (ft. BTOC):	DTW Date:	
PVC		0.010-ii	010-inch 2-inch 100 - 105			105 ft		1(	05	> 105	12/16/2020
Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	NSCS	Sample ID	Litholog	y/Remarks	Well Completion
0 5 10 15	NM	L	D	N	N	NM	CE	NS	Buff to pale	pink caliche	
20 25 30 35 40 45 50	NM	L	D	N	N	NM	SM	NS	Tan to pale	red silty sand	
55 60	NM	М	М	Ν	N	NM	ML	NS	-	ndy silt with minor m sand	
65	NM	Н	М	N	Ν	NM	CL	NS	Tan clay with	n minor gravel	T
70 75 80	NM	L	D	N	N	NM	SP	NS		aded fine sand with or silt	
85	NM	Н	D/SLM	N	N	NM	CL	NS		n clay with minor ninor angular gravel	
90 95 100	NM	M/H	М	N	N	NM	CL	NS	with minor mediu	ge sandy lean clay m sand and angular Boring: 105'	

# Attachment 02: Laboratory Analytical Results

eurofins Environment Testing Xenco

# Project Id:07052020Contact:Lynda Laumbach

#### **Project Location:**

# Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

#### Project Name: RDX 17 Federal Com #006H

 Date Received in Lab:
 Thu 07.16.2020 16:20

 Report Date:
 07.22.2020 08:07

Project Manager: Jessica Kramer

	Lab Id:	667473-00	)1	667473-0	02	667473-00	)3	667473-0	04	667473-0	05	667473-00	06
Analysis Requested	Field Id:	DS01		DS01A		DS02		DS02A		DS03		DS03A	
Inalysis Requested	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.16.2020 0	9:20	07.16.2020	09:25	07.16.2020 (	)9:30	07.16.2020 (	)9:35	07.16.2020	09:45	07.16.2020 0	)9:50
Chloride by EPA 300	Extracted:	07.17.2020 1	6:30	07.17.2020	16:30	07.17.2020	6:30	07.17.2020	16:30	07.17.2020	16:30	07.17.2020 1	16:30
	Analyzed:	07.17.2020 2	20:49	07.17.2020	21:05	07.17.2020 2	21:11	07.17.2020 2	21:16	07.17.2020	21:22	07.17.2020 2	21:39
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8340	200	723	100	4700	98.6	1430	99.8	26700	988	30900	1000

BRL - Below Reporting Limit

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

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Project Id: 07052020 **Contact:** 

Lynda Laumbach

#### **Project Location:**

# Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

Date Received in Lab: Thu 07.16.2020 16:20 Report Date: 07.22.2020 08:07

Project Manager: Jessica Kramer

	Lab Id:	667473-00	)7	667473-00	)8	667473-0	09	667473-0	10	667473-01	1	667473-01	12
Analysis Requested	Field Id:	DS03B		DS03C		DS03D		DS04		DS04A		DS04B	
Analysis Requested	Depth:	6- ft		8- ft		10- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.16.2020 0	9:55	07.16.2020 1	0:00	07.16.2020	10:05	07.16.2020	10:10	07.16.2020 1	0:20	07.16.2020 1	0:25
Chloride by EPA 300	Extracted:	07.17.2020 1	6:30	07.17.2020 1	6:30	07.17.2020	16:30	07.17.2020	16:30	07.17.2020 1	6:30	07.17.2020 1	6:30
	Analyzed:	07.17.2020 2	21:44	07.17.2020 2	1:50	07.17.2020	21:55	07.17.2020	22:01	07.17.2020 2	2:07	07.17.2020 2	22:23
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		32700	992	27200	998	28400	1000	26900	1010	23500 X	996	13800	1000

BRL - Below Reporting Limit

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eurofins Environment Testing Xenco

# Project Id:07052020Contact:Lynda Laumbach

Project Location:

# Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

#### Project Name: RDX 17 Federal Com #006H

 Date Received in Lab:
 Thu 07.16.2020 16:20

 Report Date:
 07.22.2020 08:07

Project Manager: Jessica Kramer

	Lab Id:	667473-0	13	667473-0	14	667473-0	15	667473-0	16	667473-0	17	667473-01	18
Analysis Requested	Field Id:	DS04C	2	DS05		DS05A		DS05B		DS05C		DS06	
Analysis Requested	Depth:	10- ft		2- ft		4- ft		6- ft		10- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.16.2020	10:30	07.16.2020 1	0:45	07.16.2020	10:50	07.16.2020 1	0:55	07.16.2020	11:00	07.16.2020 1	1:15
Chloride by EPA 300	Extracted:	07.17.2020	16:30	07.17.2020 1	6:30	07.17.2020	16:30	07.17.2020 1	6:30	07.17.2020	16:30	07.17.2020 1	6:30
	Analyzed:	07.17.2020	22:29	07.17.2020 2	22:46	07.17.2020 2	22:51	07.17.2020 2	22:57	07.17.2020	23:02	07.17.2020 2	23:08
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16000	1000	26000	988	24300	990	24800	994	24500	996	18800	998

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eurofins Environment Testing Xenco

**Project Id:** 07052020

Contact: Lynda Laumbach

#### **Project Location:**

Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

#### Project Name: RDX 17 Federal Com #006H

 Date Received in Lab:
 Thu 07.16.2020 16:20

 Report Date:
 07.22.2020 08:07

Project Manager: Jessica Kramer

	Lab Id:	667473-0	19	667473-0	20	667473-021		667473-022		667473-023		667473-02	24
Analysis Requested	Field Id:	DS06A		DS06E	3	DS06C		DS07		DS07A		DS07B	
Analysis Requested	Depth:	4- ft		6- ft		10- ft		2- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.16.2020	.16.2020 11:20 07		07.16.2020 11:25 07.16.2020 11:30		07.16.2020 11:50		07.16.2020 11:55		07.16.2020 12:00		
Chloride by EPA 300	Extracted:	07.17.2020	.17.2020 16:30 07		16:30	07.17.2020 1	3:25	07.17.2020 13:25		07.17.2020 1	3:25	07.17.2020 13:25	
	Analyzed:	07.17.2020	.17.2020 23:14 07		23:19	07.17.2020 19:53		07.17.2020 19:58		07.17.2020 20:04		07.17.2020 20:10	
	Units/RL:	mg/kg	ıg/kg RL n		RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		34600	990	37900	998	28400	988	26300	992	22500	992	23100	998
TPH By SW8015 Mod	Extracted:							07.17.2020	14:30	07.17.2020 1	4:30		
	Analyzed:							07.17.2020	21:02	07.17.2020 2	21:22		
	Units/RL:							mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)								<49.8	49.8	<49.9	49.9		
Diesel Range Organics (DRO)								<49.8	49.8	<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)								<49.8	49.8	<49.9	49.9		
Total TPH								<49.8	49.8	<49.9	49.9		

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Received	by	OCD:	7/19/2024	8:47:33 AM
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Project Id:07052020Contact:Lynda Laumbach

#### **Project Location:**

Certificate of Analysis Summary 667473

WPX Energy Permian Basin, LLC, Carlsbad, NM

Project Name: RDX 17 Federal Com #006H

 Date Received in Lab:
 Thu 07.16.2020 16:20

 Report Date:
 07.22.2020 08:07

Project Manager: Jessica Kramer

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

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# Analytical Report 667473

# for

# WPX Energy Permian Basin, LLC

Project Manager: Lynda Laumbach

RDX 17 Federal Com #006H

#### 07052020

#### 07.22.2020

Collected By: Client

1089 N Canal Street Carlsbad, NM 88220

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

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

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

eurofins Environment Testing Xenco

07.22.2020

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

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

#### Lynda Laumbach:

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

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

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

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

Respectfully,

fession kenner

Jessica Kramer Project Manager

A Small Business and Minority Company

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# Sample Cross Reference 667473

## WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

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

eurofins Environment Testing Xenco

## **CASE NARRATIVE**

Client Name: WPX Energy Permian Basin, LLC Project Name: RDX 17 Federal Com #006H

 Project ID:
 07052020

 Work Order Number(s):
 667473

 Report Date:
 07.22.2020

 Date Received:
 07.16.2020

#### Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3132059 Chloride by EPA 300

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

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

Environment Testing Xenco

# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS01</b> d: 667473-001		Matrix: Date Col	Soil lected: 07.16.2020 09:2	0	Date Received: Sample Depth:	5:20	
Analytical Me Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst: Seq Number:	MAB 3132059		Date Pre	p: 07.17.2020 16:3	0	Basis:	Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	8340	200	mg/kg	07.17.2020 20	:49	20

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS01A</b> Lab Sample Id: 667473-002		Matrix: Soil Date Collected: 07.16.2020 09:25			Date Received:07.16.2020 16:20 Sample Depth: 4 ft			
Analytical Method: Chloride by Tech: MAB	EPA 300				Prep Method: E30 % Moisture:	00P		
Analyst: MAB		Date Prep:	07.17.2020 16:30	)	Basis: We	t Weight		
Seq Number: 3132059								
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	723	100	mg/kg	07.17.2020 21:05		10	

Environment Testing Xenco

# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS02</b> Lab Sample Id: 667473-003		Matrix: Soil Date Collected: 07.16.2020 09:30			Date Received:07.16.2020 16:20 Sample Depth: 2 ft			
Analytical Method: Chloride by EP Tech: MAB	A 300				Prep Method: E	300P		
Analyst: MAB		Date Prep	: 07.17.2020 16:30	)	Basis: W	et Weight		
Seq Number: 3132059								
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	4700	98.6	mg/kg	07.17.2020 21:11	l	10	

Environment Testin Xenco

## WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	Lab Sample Id: 667473-004			Soil lected: 07.16.2020 09:35	5	20		
Analytical Me Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Prep	p: 07.17.2020 16:30	)	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	1430	99.8	mg/kg	07.17.2020 21:	:16	10

Environment Testing Xenco

# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS03</b> d: 667473-005		Matrix: Date Col	Soil lected: 07.16.2020 09:4	5	Date Received Sample Depth:	5:20	
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Prej	p: 07.17.2020 16:3	0	Basis:	Wet Weight	
Seq Number: Parameter	3132059	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	26700	988	mg/kg	07.17.2020 21	0	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	Sample Id: 667473-006			Soil lected: 07.16.2020 09:5	0	5:20		
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 16:3	0	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	30900	1000	mg/kg	07.17.2020 21	:39	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	Sample Id: 667473-007			Matrix: Soil Date Collected: 07.16.2020 09:55			Date Received:07.16.2020 16: 5 Sample Depth: 6 ft			
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300					Prep Method: % Moisture:	E300	)P	
Analyst:	MAB		Date Pre	p: 07.17	.2020 16:30		Basis:	Wet	Weight	
Seq Number:	3132059									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil
Chloride		16887-00-6	32700	992		mg/kg	07.17.2020 2	1:44		100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS03C</b> d: 667473-008		Matrix: Date Col	Soil lected: 07.16	.2020 10:00		Date Received:07.16.2020 16:20 Sample Depth: 8 ft			
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300					Prep Method: % Moisture:	E300	)P	
Analyst:	MAB		Date Pre	p: 07.17	.2020 16:30		Basis:	Wet	Weight	
Seq Number:	3132059									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil
Chloride		16887-00-6	27200	998		mg/kg	07.17.2020 21	1:50		100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS03D</b> Lab Sample Id: 667473-009		Matrix: Date Coll	Soil ected: 07.16.2020 10:05	i	Date Received Sample Depth		16:20
Analytical Method: Chloride by EPA Tech: MAB Analyst: MAB	A 300	Date Prep	o: 07.17.2020 16:30	)	Prep Method: % Moisture: Basis:	E300P Wet Weight	
Seq Number: 3132059 Parameter	Cas Number	Result	RL	Units	Analysis Da	nte Flag	Dil
Chloride	16887-00-6	28400	1000	mg/kg	07.17.2020 21	:55	100
Environment Testing Xenco

# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS04</b> Lab Sample Id: 667473-010		Matrix: Date Coll	Soil ected: 07.16.2020 10:10	)	Date Received Sample Depth		20 16:	20
Analytical Method: Chloride by EPA Tech: MAB Analyst: MAB	x 300	Date Prep	o: 07.17.2020 16:30	1	Prep Method: % Moisture: Basis:	E300P Wet We	ight	
Seq Number: 3132059								
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate F	lag	Dil
Chloride	16887-00-6	26900	1010	mg/kg	07.17.2020 22	2:01		100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS04A Lab Sample Id: 667473-011		Matrix: Date Col	Soil lected: 07.16.2020 10:20	)	Date Received:0 Sample Depth: 4		:20
Analytical Method: Chloride by EP. Tech: MAB	A 300				Prep Method: E % Moisture:	E300P	
Analyst: MAB		Date Prep	p: 07.17.2020 16:30	)	Basis: V	Wet Weight	
Seq Number: 3132059							
Parameter	Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Chloride	16887-00-6	23500	996	mg/kg	07.17.2020 22:0	)7 X	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS04B</b> Lab Sample Id: 667473-012		Matrix: Date Col	Soil lected: 07.16.2020 10	:25	Date Received Sample Depth		:20
Analytical Method: Chloride by EPA Tech: MAB Analyst: MAB Seq Number: 3132059	300	Date Prej	p: 07.17.2020 16	:30	Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter Chloride	<b>Cas Number</b> 16887-00-6	Result	<b>RL</b>	Units mg/kg	<b>Analysis Da</b> 07.17.2020 22	8	<b>Dil</b>

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS04C</b> Lab Sample Id:667473-013		Matrix: Date Coll	Soil ected: 07.16.2020 10:30		Date Received Sample Depth	 .2020 16:2	20
Analytical Method: Chloride by EPA 3 Tech: MAB Analyst: MAB Seq Number: 3132059	00	Date Prep	o: 07.17.2020 16:30		Prep Method: % Moisture: Basis:	P Veight	
Parameter Chloride	<b>Cas Number</b> 16887-00-6	Result 16000	<b>RL</b>	Units mg/kg	Analysis D: 07.17.2020 22	Flag	<b>Dil</b>

Environment Testing Xenco

# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS05</b> d: 667473-014		Matrix: Date Col	Soil lected: 07.16.2020 1	10:45	Date Received: Sample Depth: 2		:20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: H % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 1	16:30	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Chloride		16887-00-6	26000	988	mg/kg	07.17.2020 22:4	46	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS05A</b> d: 667473-015		Matrix: Date Col	Soil lected: 07.16.2020 10	:50	Date Received: Sample Depth:		5:20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 16	:30	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	24300	990	mg/kg	07.17.2020 22:	:51	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS05B</b> Lab Sample Id: 667473-016		Matrix: Date Colle	Soil ected: 07.16.2020 10:55	i	Date Received Sample Depth:		5:20
Analytical Method: Chloride by EPA Tech: MAB	A 300				Prep Method: % Moisture:		
Analyst: MAB Seq Number: 3132059		Date Prep	: 07.17.2020 16:30	)	Basis:	Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride	16887-00-6	24800	994	mg/kg	07.17.2020 22	:57	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS05C</b> d: 667473-017		Matrix: Date Col	Soil lected: 07.16.2020 11	1:00	Date Received: Sample Depth:		5:20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: 1 % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 16	5:30	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Chloride		16887-00-6	24500	996	mg/kg	07.17.2020 23:0	02	100

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#### WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS06</b> d: 667473-018		Matrix: Date Col	Soil lected: 07.16.2020 11:1	.5	Date Received: Sample Depth:		5:20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 16:3	80	Basis:	Wet Weight	
Seq Number: Parameter	3132059	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	18800	998	mg/kg	07.17.2020 23:	:08	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS06A</b> d: 667473-019		Matrix: Date Col	Soil lected: 07.16.2020 11:2	20	Date Received Sample Depth:		5:20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Pre	p: 07.17.2020 16:3	80	Basis:	Wet Weight	
Seq Number:	3132059							
Parameter		Cas Number	Result	RL	Units	Analysis Da	ite Flag	Dil
Chloride		16887-00-6	34600	990	mg/kg	07.17.2020 23	:14	100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id:         DS06B           Lab Sample Id:         667473-020		Matrix: Date Coll	Soil ected: 07.16.2020 11:25	i	Date Received: Sample Depth: 6		5:20
Analytical Method: Chloride by Tech: MAB	EPA 300				Prep Method: I % Moisture:	E300P	
Analyst: MAB		Date Prep	. 07.17.2020 16:30	)		Wet Weight	
Seq Number: 3132059							
Parameter	Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Chloride	16887-00-6	37900	998	mg/kg	07.17.2020 23:1	19	100

Released to Imaging: 8/28/2024 3:46:21 PM

#### WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample Id	<b>DS06C</b> d: 667473-021		Matrix: Date Col	Soil lected: 07.16.2020 11:3	0	Date Received Sample Depth:		6:20
Analytical Me Tech:	ethod: Chloride by EPA MAB	300				Prep Method: % Moisture:	E300P	
Analyst:	MAB		Date Prej	p: 07.17.2020 13:2	25	Basis:	Wet Weight	
Seq Number: Parameter	3132057	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	28400	988	mg/kg	07.17.2020 19	:53	100

Received by OCD: 7/19/2024 8:47:33 AM

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# **Certificate of Analytical Results 667473**

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: DS07 Lab Sample Id: 667473-022		Matrix: Date Col	Soil lected: 07.16.2020 11:5	0	Date Received:07.1 Sample Depth: 2 ft	6.2020 16:	20
Analytical Method: Chloride by EF	PA 300				Prep Method: E300	OP	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Pre	p: 07.17.2020 13:2	5	Basis: Wet	Weight	
Seq Number: 3132057			L				
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26300	992	mg/kg	07.17.2020 19:58		100
Analytical Method:TPH By SW80Tech:DTHAnalyst:DTHSeq Number:3132061	15 Mod	Date Pre	p: 07.17.2020 14:3	0	Prep Method: SW8 % Moisture: Basis: Wet	8015P Weight	
Beq Mulliber. 5152001							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
	Cas Number PHC610	Result	<b>RL</b> 49.8	Units mg/kg	<b>Analysis Date</b> 07.17.2020 21:02	Flag	<b>Dil</b>
Parameter					•	6	
Parameter Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.17.2020 21:02	U	1
Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	PHC610 C10C28DRO	<49.8 <49.8	49.8 49.8	mg/kg mg/kg	07.17.2020 21:02 07.17.2020 21:02	U U U	1 1
Parameter Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) Motor Oil Range Hydrocarbons (MRO)	PHC610 C10C28DRO PHCG2835 PHC635	<49.8 <49.8 <49.8 <49.8	49.8 49.8 49.8	mg/kg mg/kg mg/kg	07.17.2020 21:02 07.17.2020 21:02 07.17.2020 21:02 07.17.2020 21:02	U U U U	1 1 1

109

%

70-135

07.17.2020 21:02

84-15-1

o-Terphenyl

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# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id:DS07ALab Sample Id:667473-023		Matrix: Date Colle	Soil ected: 07.16.2020 11:55		Date Received:07 Sample Depth: 4		:20
Analytical Method: Chloride by El	PA 300				Prep Method: E	300P	
Tech: MAB					% Moisture:		
Analyst: MAB		Date Prep:	07.17.2020 13:25		Basis: W	et Weight	
Seq Number: 3132057		-					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22500	992	mg/kg	07.17.2020 20:04	1	100
Analytical Method: TPH By SW80	)15 Mod				Prep Method: S	W8015P	
Tech: DTH					% Moisture:		
Analyst: DTH		Date Prep:	07.17.2020 14:30		Basis: W	et Weight	
Seq Number: 3132061						C	
	~ •• •	Result	DI	Units	A	T.L.	<b>D</b> "
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Parameter Gasoline Range Hydrocarbons (GRO)	Cas Number PHC610	<49.9	<b>RL</b> 49.9	mg/kg	07.17.2020 21:22	Ũ	1 Dil

Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.	9 49.9		mg/kg	07.17.2020 21:22	U	1
Total TPH	PHC635	<49.	9 49.9		mg/kg	07.17.2020 21:22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	112	%	70-135	07.17.2020 21:22		
o-Terphenyl		84-15-1	112	%	70-135	07.17.2020 21:22		

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: Lab Sample I	<b>DS07B</b> d: 667473-024		Matrix: Date Col	Soil lected: 07.16.2	2020 12:00		Date Received Sample Depth		5.2020 16:2	20
Analytical Mo Tech:	ethod: Chloride by EPA MAB	300					Prep Method: % Moisture:	E300	P	
Analyst:	MAB		Date Pre	p: 07.17.2	2020 13:25		Basis:	Wet	Weight	
Seq Number:	3132057									
Parameter		Cas Number	Result	RL	U	Jnits	Analysis Da	nte	Flag	Dil
Chloride		16887-00-6	23100	998	m	ng/kg	07.17.2020 20	):10		100

# WPX Energy Permian Basin, LLC, Carlsbad, NM

RDX 17 Federal Com #006H

Sample Id: <b>DS07C</b> Lab Sample Id:667473-025		Matrix: Date Coll	Soil ected: 07.16.2020 12:05	i	Date Received Sample Depth:		5:20
Analytical Method: Chloride by EP Tech: MAB Analyst: MAB	YA 300	Date Prep	o: 07.17.2020 13:25	ī	Prep Method: % Moisture: Basis:	E300P Wet Weight	
Seq Number: 3132057	Cas Number	Result	RL	T		ta Flan	D:I
Chloride	16887-00-6	23800	1000	Units mg/kg	Analysis Da 07.17.2020 20	8	<b>Dil</b> 100

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# **Flagging Criteria**

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

\*\* Surrogate recovered outside laboratory control limit.

<b>BRL</b> Below Reporting Limit.	ND Not Detected			
<b>RL</b> Reporting Limit				
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection	
PQL Practical Quantitation Limit	MQL Method Qu	antitation Limit	LOQ Limit of Quantitatio	n
DL Method Detection Limit				
NC Non-Calculable				
SMP Client Sample		BLK	Method Blank	
BKS/LCS Blank Spike/Laboratory	Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory Control Sample Duplicate
MD/SD Method Duplicate/Samp	le Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate
+ NELAC certification not offered	for this compound.			

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

#### Received by OCD: 7/19/2024 8:47:33 AM

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**Environment Testing** 

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QC Summary 667473

# WPX Energy Permian Basin, LLC

RDX 17 Federal Com #006H

-	00		Matrix:	Solid			Pr				
7707603-1-BLK					I-BKS		LCSI		•		
MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
<10.0	250	254	102	265	106	90-110	4	20	mg/kg	07.17.2020 17:50	
Chloride by EPA 3 3132059	00		Matrix:	Solid			Pr				
7707604-1-BLK		LCS Sar	nple Id:	7707604-1	I-BKS		LCSI	D Sample	e Id: 770	7604-1-BSD	
MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
<10.0	250	255	102	266	106	90-110	4	20	mg/kg	07.17.2020 20:37	
Chloride by EPA 3	00						Pr			OP	
3132057					14.6		MC		-		
	Smiller		-			T ::4a		-			
Result	Amount	Result	MS %Rec	Result	MSD %Rec	Linns	%KPD	Limit	Units	Date	Flag
285	200	492	104	492	104	90-110	0	20	mg/kg	07.17.2020 18:07	
Chloride by EPA 3	00						Pr	ep Meth	od: E30	OP	
3132057									-		
667509-024			-					-			
Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
360	200	553	97	554	97	90-110	0	20	mg/kg	07.17.2020 19:25	
Chloride by EPA 3	00						Pr	ep Meth	od: E30	OP	
3132059											
			-					•			
Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
		8530	95	8530	94	90-110	0	20	mg/kg	07.17.2020 20:54	
8340	201	8550	,,,								
8340	201	8550	20								
		8330					Pr	ep Meth	od: E30	0P	
8340 Chloride by EPA 3 3132059			Matrix:				Pr	ep Metho Date Pr		0P 17.2020	
Chloride by EPA 3		MS Sar	Matrix: nple Id:	Soil 667473-01	11 S		MS	Date Pr	ep: 07.1 e Id: 667		
<b>Chloride by EPA 3</b> 3132059			Matrix:	667473-02 MSD	MSD	Limits		Date Pr	ep: 07.1	7.2020	Flag
<b>Chloride by EPA 3</b> 3132059 667473-011 <b>Parent</b>	00 Spike	MS Sar MS	Matrix: nple Id: <b>MS</b>	667473-01	MSD %Rec	<b>Limits</b> 90-110	MS	Date Pr D Sample <b>RPD</b>	ep: 07.1 e Id: 667	17.2020 473-011 SD Analysis	Flag X
	3132057 7707603-1-BLK MB Result <10.0 Chloride by EPA 3 3132059 7707604-1-BLK MB Result <10.0 Chloride by EPA 3 3132057 667509-014 Parent Result 285 Chloride by EPA 3 3132057 667509-024 Parent Result 360 Chloride by EPA 3 3132059 667473-001 Parent	MB       Spike         Result       Amount         <10.0	3132057 7707603-1-BLK LCS Sar MB Spike LCS Result Amount 250 254 Chloride by EPA 300 3132059 7707604-1-BLK LCS Sar MB Spike LCS Result Amount Result <10.0 250 255 Chloride by EPA 300 3132057 667509-014 MS Sar Parent Spike MS Result Amount 285 200 492 Chloride by EPA 300 3132057 667509-024 MS Sar Parent Spike MS Result Amount Sar Parent Spike MS	3132057Matrix: ICS Sample Id:7707603-1-BLKLCS Sample Id:MB ResultSpike AmountLCS ResultLCS %Rec %Rec<10.0	3132057Matrix:Solid7707603-1-BLKLCS Sample Id:7707603-1MB ResultSpike AmountLCS ResultLCS %RecLCSD Result<10.0	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	3132057       Matrix:       Solid         7707603-1-BLK       LCS Sample Id:       7707603-1-BKS         MB       Spike       LCS       LCS       LCS       LCSD       LCSD       MSD $< 10.0$ 250       254       102       265       106       90-110         Chloride by EPA 300       Matrix:       Solid       LCSD       LCSD       LCSD       LCSD       MSD       LCSD       MITIN:         3132059       Matrix:       Solid       7707604-1-BKS       LCSD       LCSD       LCSD       LCSD       LCSD       LCSD       LCSD       MSD       MITIN:       Solid         7007604-1-BLK       LCS       Solid       7707604-1-BKS       LCSD       LCSD       LCSD       LCSD       LImits         Result       Amount       LCS       LCS       LCSD       LCSD	3132057       Matrix:       Solid         7707603-1-BLK       LCS Sample Id:       7707603-1-BKS       LCSI         MB       Spike       LCS       LCS       LCSD       LCSD       LCSD       LCSD         Result       Amount       Result       %Rec       Result       %Rec       %Rep         <10.0	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	3132057     Matrix:     Solid     Date Prep:     07.1       7707603-1-BLK     LCS Sample Id:     7707603-1-BKS     LCSD Sample Id:     770       MB     Spike     LCS     LCS     LCSD     LCSD     Limits     %RPD     RPD     Units         250     254     102     265     106     90-110     4     20     mg/kg       Chloride by EPA 300     Spike     LCS     LCS     LCSD     Limits     %Rec     Metrix:     Solid     Date Prep:     07.1       7707604-1-BLK     LCS Sample Id:     7707604-1-BKS     LCSD Sample Id:     770     Date Prep:     07.1       7707604-1-BLK     LCS LCS     LCSD LCSD     Limits     %RPD     RPD     Units       Result     Amount     Result     %Rec     Result     %Rec     100     20     mg/kg       Chloride by EPA 300     3132057     Matrix:     Soil     MSD     MSD     Sample Id:     667509-014     MSD     Sample Id:     667509-014     MSD     Sample Id:     667509-014     MSD     Sample Id:     667509-024     MSD     Sample Id:     667509-024     MSD     Sample Id:     667509-024     MSD     Sample Id:     667509-024     MSD     Sample Id:     667	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference  $\begin{array}{l} [D] = 100*(C-A) \ / \ B \\ RPD = 200* \ | \ (C-E) \ / \ (C+E) \ | \\ [D] = 100*(C) \ / \ [B] \\ Log \ Diff. = Log(Sample \ Duplicate) \ - \ Log(Original \ Sample) \end{array}$ 

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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Final 1.000
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#### Received by OCD: 7/19/2024 8:47:33 AM

Xenco

**Environment Testing** 

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QC Summary 667473

#### WPX Energy Permian Basin, LLC

RDX 17 Federal Com #006H

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>TPH By S</b> 3132061 7707606-1		od	LCS San	Matrix: nple Id:	Solid 7707606-2	I-BKS			ep Meth Date Pr D Sample	ep: 07.1	8015P 7.2020 7606-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocart	oons (GRO)	< 50.0	1000	1040	104	1040	104	70-135	0	35	mg/kg	07.17.2020 14:31	
Diesel Range Organics	(DRO)	<50.0	1000	1010	101	1180	118	70-135	16	35	mg/kg	07.17.2020 14:31	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			mits	Units	Analysis Date	
1-Chlorooctane		117		1	26		127		70	-135	%	07.17.2020 14:31	
o-Terphenyl		119		1	26		124		70	-135	%	07.17.2020 14:31	

Analytical Method:THSeq Number:31	32061 Matrix:	Solid Prep Method 5 7707606-1-BLK			
Parameter Motor Oil Range Hydrocarbons	(MRO) MB Result		<b>Units</b> mg/kg	<b>Analysis</b> <b>Date</b> 07.17.2020 14:10	Flag

Analytical Method:	TPH By S	W8015 M	lod						P	rep Meth	od: SW	8015P	
Seq Number:	3132061				Matrix:	Soil				Date Pr	ep: 07.1	17.2020	
Parent Sample Id:	667509-01	4		MS Sar	nple Id:	667509-01	14 S		MS	D Sample	e Id: 667	509-014 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	999	1010	101	948	95	70-135	6	35	mg/kg	07.17.2020 15:34	
Diesel Range Organics	(DRO)	<50.0	999	1110	111	1040	104	70-135	7	35	mg/kg	07.17.2020 15:34	
Surrogate					1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date	
1-Chlorooctane				1	23		121		70	-135	%	07.17.2020 15:34	
o-Terphenyl				1	06		100	)	70	-135	%	07.17.2020 15:34	

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

 LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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Page 37 of 41

Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na b Mn Mo Ni Se Ag TI U tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated. ed by: (Signature) Received by: (Signature)	AM       S       G:35       Z'         DS 2 A       S       G:45       Z'         DS 3 A       S       G:45       Z'         DS 4       S       G:55       Z'       V         DS 4       S       G:55       Z'       V       V         Circle Method(s) and Metal(s) to be analyzed       TCLP / SPLP 6010: BRCRA Sb As Ba Be Cd Cr Co Cu F       Go Cu Cu F         Transmum charge of \$55.00 will be applied to each project and a charge of \$5 for each
Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na b Mn Mo Ni Se Ag TI U tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	
Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Db Mn Mo Ni Se Ag TI U Utrators. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	
Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Do Mn Mo Ni Se Ag TI U tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	
Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Pb Mn Mo Ni Se Ag Ti U Hg:	
Ag SiO <sub>2</sub> Na	
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2       4       2       Depth       Gray       #         2       4       2       Comp       Comp       Cont         3       4       4       4       Comp       Cont       Chlorid         3       4       4       4       Chlorid       BTEX (N         4       4       4       4       4       Chlorid         5       4       4       4       4       4         4       4       4       4       4       4         5       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4       4       4       4       4       4         4 <td< td=""><td></td></td<>	
V     L     Depth     Grab       V     L     Comp     Cont       Cont     Chlorid       BTEX (N       TPH (M)       I     I	A
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	ate ZIF.
WPX Energy Permian, LLC. Program: IIST/DST Dep	/ Name:
Bill to: (if different) Lynda Laumbach	
Atianta, GA (770) 449-8800	

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Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Ant

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eived.	by				024 8		:33			Г	Γ	Γ	Γ	T	T		V	Total	Sam	Cool	Rece	SAI	PO #:	Sam		Pro	FIIUIE.				Cor	Pro	Page 45
		relinguished by: (algnature	If service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$86.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Votice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed					1	P507C	0507	D5071	< -5U	9050	Sample Identification	Connella	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	SAMPLE RECEIPT	#	Sampler's Name:	Toject Number.	Project Name:	JIE.	Dhono:	Other State VID.	frace:	Company Name:	Project Manager:	>
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	)	re)	or each sam	chase order	om Texa	1					101	6	41	21	101	Depth						Yes	eived by 4:3	142120	Rush	Turn Around	Lynda.La	City, State ZIP:	Address:	Company Name:	DIII to: (if different)	Bill to: at	<ul> <li>Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296</li> <li>Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900</li> <li>Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Deiray Beach, FL (561) 689-6701</li> </ul>
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-	-	_		Hg: 1631 / 245.1 / 7470 / 7471	TI Sn											Sampl	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na2S2O3: NaSO3	NaHSO4: NABIS	H <sub>3</sub> PO <sub>4</sub> : HP	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub>	HCL: HC	Cool: Cool	None: NO	Prese		T		lds RC	nments	Page	lovety
		Date/Time		1 / 7470	U V Zn											Sample Comments	rbic Acid:	VaOH: Zn	ISO3	ABIS		Nac	HNG	Me	NO DI Water	rvativo	ň			ĉ		h	ette
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# **Eurofins Xenco, LLC**

#### Prelogin/Nonconformance Report- Sample Log-In

Date/ Time Received:       Air and Metal samples Acceptable Range: Ambient         Temperature Measuring device used:       Temperature device used:         Sample Receipt Checklist       Comments         #1 *Temperature of cooler(s)?       2.7         #2 *Shipping container in good condition?       Yes         #3 *Samples received on ice?       Yes         #4 *Custody Seals intact on shipping container/ cooler?       Yes         #5 Custody Seals intact on sample bottles?       Yes         #6*Custody Seals Signed and dated?       Yes         #7 *Chain of Custody present?       Yes         #10 Chain of Custody signed when relinquished/ received?       Yes         #11 Container label(s) legible and intact?       Yes         #12 Samples received?       Yes         #13 Samples properly preserved?       Yes         #14 Sample container(s) intact?       Yes         #15 Sufficient sample amount for indicated test(s)?       Yes         #16 All samples received within hold time?       Yes         #17 Subcontract of sample(s)?       Yes         #17 Subcontract of sample(s)?       Yes         #18 Water VOC samples have zero headspace?       No	Client: WPX Energy Permian Basin, LLC	Acceptable Te	Acceptable Temperature Range: 0 - 6 degC							
Sample Receipt ChecklistComments#1 *Temperature of cooler(s)?2.7#2 *Shipping container in good condition?Yes#3 *Samples received on ice?Yes#4 *Custody Seals intact on shipping container/ cooler?Yes#5 Custody Seals intact on sample bottles?Yes#6*Custody Seals Signed and dated?Yes#7 *Chain of Custody present?Yes#8 Any missing/extra samples?No#9 Chain of Custody signed when relinquished/ received?Yes#10 Chain of Custody agrees with sample labels/matrix?Yes#11 Container label(s) legible and intact?Yes#12 Samples in proper container/ bottle?Yes#13 Samples properly preserved?Yes#14 Sample container(s) intact?Yes#15 Sufficient sample amount for indicated test(s)?Yes#16 All samples received within hold time?Yes#17 Subcontract of sample(s)?No	Date/ Time Received: 07.16.2020 04.20.00 PI	Alman al Matal								
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#16 All samples received within hold time?Yes#17 Subcontract of sample(s)?No	#14 Sample container(s) intact?		Yes							
#17 Subcontract of sample(s)? No	#15 Sufficient sample amount for indicated test	t(s)?	Yes							
	#16 All samples received within hold time?		Yes							
#18 Water VOC samples have zero headspace? N/A	#17 Subcontract of sample(s)?		No							
	#18 Water VOC samples have zero headspace	e?	N/A							

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

Analyst:

PH Device/Lot#:

Checklist completed by: Date: 07.16.2020 Elizabeth McClellan

Checklist reviewed by: Jessica VRAMER Jessica Kramer

Date: 07.20.2020

Received by OCD: 7/19/2024 8:47:33 AM

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Released to Imaging: 8/28/2024 3:46:21 PM

# 🔅 eurofins

# **Environment Testing** America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-380-1

Client Project/Site: RDX Federal 17-6

#### For:

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

Attn: Lynda Laumbach

RAMER

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

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

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#### **Definitions/Glossary**

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

Job ID: 890-380-1

Qualifiers

Qualifiers		3
HPLC/IC		
Qualifier U	Qualifier Description Indicates the analyte was analyzed for but not detected.	4
0	indicates the analyte was analyzed for but not detected.	
Glossary		5
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	0
CNF	Contains No Free Liquid	0
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	9
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
TNTC	Too Numerous To Count	

#### **Case Narrative**

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

Job ID: 890-380-1

#### Job ID: 890-380-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-380-1

#### Receipt

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

#### HPLC/IC

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

		Client	Sample R	esults	;				
Client: WPX Energy Production LLC Project/Site: RDX Federal 17-6								Job ID: 89	90-380-1
Client Sample ID: SS01							Lab S	ample ID: 890	0-380-1
Date Collected: 03/16/21 13:40								Matr	ix: Solic
Date Received: 03/18/21 08:05									
		0.1.1.1.							
Method: 300.0 - Anions, Ion Chromatogi			ы	MDI	11		Duananad	Amelyreed	
Analyte	379	Qualifier		MDL	mg/Kg	D	Prepared	Analyzed 03/19/21 15:38	Dil Fa
	519		5.04		ilig/itg			03/19/21 13:30	
Client Sample ID: SS02							Lab S	ample ID: 890	)-380-2
Date Collected: 03/16/21 13:45								Matr	ix: Solic
Date Received: 03/18/21 08:05									
	anhy -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	440		4.96		mg/Kg		•	03/19/21 15:53	
_									
Client Sample ID: SS03							Lab S	ample ID: 890	
Date Collected: 03/16/21 13:50								Matr	ix: Solio
Date Received: 03/18/21 08:05									
	aphy -	Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	57.8		4.98		mg/Kg			03/19/21 15:58	
Client Sample ID: SS04							l ah S	ample ID: 890	1-380-/
Date Collected: 03/16/21 13:55							Lab 5		ix: Solic
Date Received: 03/18/21 08:05								Wat	ix. 30iit
Method: 300.0 - Anions, Ion Chromatogi	aphy -	Soluble							
Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fa
Chloride	888		5.02		mg/Kg			03/19/21 16:03	
Client Sample ID: SS05							Lab S	ample ID: 890	)-380-5
Date Collected: 03/16/21 14:00								Matri	ix: Solic
Date Received: 03/18/21 08:05									
Method: 300.0 - Anions, Ion Chromatogi						_	<u> </u>		
Analyte	1060	Qualifier		MDL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed 03/19/21 16:08	Dil Fa
Chloride	1000		5.04		mg/Kg			03/19/21 10:08	
Client Sample ID: SS06							Lab S	ample ID: 890	)-38 <mark>0-</mark> 6
Date Collected: 03/16/21 14:05								Matr	ix: Solio
Date Received: 03/18/21 08:05									
– Method: 300.0 - Anions, Ion Chromatogi	anhu	Solubla							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	273		5.05		mg/Kg			03/19/21 16:23	
- Client Semple ID: SS07							Lah S	ample ID: 900	200 7
Client Sample ID: SS07							Lau S	ample ID: 890	
Date Collected: 03/16/21 14:10 Date Received: 03/18/21 08:05								watr	ix: Solic
Method: 300.0 - Anions, Ion Chromatogi	aphy -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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

Eurofins Xenco, Carlsbad

Received b	by OCD:	7/19/2024	8:47:33 AM

		Client	Sample R	esults	5				
Client: WPX Energy Production LLC Project/Site: RDX Federal 17-6								Job ID: 89	0-380-1
Client Sample ID: SS08							Lab S	ample ID: 890	)-380-8
Date Collected: 03/16/21 14:15								Matri	ix: Solid
Date Received: 03/18/21 08:05									
Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	707		4.98		mg/Kg			03/19/21 16:33	1
Client Sample ID: SS09							Lab S	ample ID: 890	)-380-9
Date Collected: 03/16/21 14:20								Matri	ix: Solid
Date Received: 03/18/21 08:05									
Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	125		4.95		mg/Kg			03/19/21 16:38	1
Client Sample ID: SS10							Lab Sa	mple ID: 890-	380-10
Date Collected: 03/16/21 14:25								Matri	ix: Solid
Date Received: 03/18/21 08:05									
Method: 300.0 - Anions, Ion Chrom	atography -	Soluble							
Method: 300.0 - Anions, Ion Chrom Analyte		Soluble Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			<b>RL</b> 5.04	MDL	Unit mg/Kg	D	Prepared	Analyzed 03/19/21 16:43	Dil Fac
Analyte Chloride	Result			MDL		<u> </u>	•		1
Analyte Chloride Client Sample ID: SS11	Result			MDL		<u>D</u>	•	03/19/21 16:43	1
Analyte	Result			MDL		<u> </u>	•	03/19/21 16:43	1 <b>380-11</b>
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30	Result 347	Qualifier		MDL		<u>D</u>	•	03/19/21 16:43	1 <b>380-11</b>
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05	Result 347	Qualifier		MDL	mg/Kg	<u>D</u>	•	03/19/21 16:43	1 <b>380-11</b>
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom	Result 347	Qualifier	5.04		mg/Kg		Lab Sa	03/19/21 16:43 mple ID: 890- Matri	1 380-11 ix: Solid
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom Analyte Chloride	Result 347 atography - Result	Qualifier	5.04		mg/Kg		Lab Sa Prepared	03/19/21 16:43 mple ID: 890- Matri Analyzed	1 380-11 ix: Solid 
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom Analyte Chloride Client Sample ID: SS12	Result 347 atography - Result	Qualifier	5.04		mg/Kg		Lab Sa Prepared	03/19/21 16:43 mple ID: 890- Matri Analyzed 03/19/21 18:33 mple ID: 890-	1 380-11 ix: Solid 
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom Analyte Chloride Client Sample ID: SS12 Date Collected: 03/16/21 14:35	Result 347 atography - Result	Qualifier	5.04		mg/Kg		Lab Sa Prepared	03/19/21 16:43 mple ID: 890- Matri Analyzed 03/19/21 18:33 mple ID: 890-	1 380-11 ix: Solid Dil Fac 5 380-12
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom Analyte Chloride Client Sample ID: SS12 Date Collected: 03/16/21 14:35	Result 347 atography - Result 368	Qualifier	5.04		mg/Kg		Lab Sa Prepared	03/19/21 16:43 mple ID: 890- Matri Analyzed 03/19/21 18:33 mple ID: 890-	1 380-11 ix: Solid Dil Fac 5 380-12
Analyte Chloride Client Sample ID: SS11 Date Collected: 03/16/21 14:30 Date Received: 03/18/21 08:05 Method: 300.0 - Anions, Ion Chrom Analyte Chloride Client Sample ID: SS12 Date Collected: 03/16/21 14:35 Date Received: 03/18/21 08:05	Result 347 atography - Result 368	Qualifier	5.04		Unit mg/Kg		Lab Sa Prepared	03/19/21 16:43 mple ID: 890- Matri Analyzed 03/19/21 18:33 mple ID: 890-	1 380-11 ix: Solid Dil Fac 5 380-12

#### **QC Sample Results**

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-593/1-A												Client S	Sample ID: I	Nethod	I Blank
Matrix: Solid													Prep	Type: S	Soluble
Analysis Batch: 594															
		MB	MB												
Analyte	R	esult	Qualifier		RL		MDL	Unit		D	Р	repared	Analyz	ed	Dil Fac
Chloride	<	<5.00	U		5.00			mg/Kg		_			03/19/21	15:23	
Lab Sample ID: LCS 880-593/2-A										С	lient	Sample	e ID: Lab Co		
Matrix: Solid													Prep	Type: S	Soluble
Analysis Batch: 594															
				Spike			LCS						%Rec.		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Chloride				250		263.4			mg/Kg			105	90 - 110		
Lab Sample ID: LCSD 880-593/3-A									Cli	ent	Sam	ple ID:	Lab Contro	-	
Matrix: Solid													Prep	Type: S	Soluble
Analysis Batch: 594				• •				_							
Analyta				Spike		LCSD			11		<b>_</b>	% Dee	%Rec.	000	RPD
Analyte Chloride				Added 250		Result 265.4	Qua	Inter	Unit		<u>D</u>	%Rec 106	Limits 90 - 110	1	2
				250		200.4			mg/Kg			106	90 - 110	I	20
Lab Sample ID: 890-380-1 MS Matrix: Solid													Client Sar Prep	nple ID Type: S	
Analysis Batch: 594															
-	Sample	Sam	ple	Spike		MS	MS						%Rec.		
Analyte	Result	Qua	lifier	Added		Result	Qual	lifier	Unit		D	%Rec	Limits		
Chloride	379			252		640.4			mg/Kg			104	90 - 110		
Lab Sample ID: 890-380-1 MSD Matrix: Solid													Client Sar Prep	nple ID Type: S	
Analysis Batch: 594		_													
• • •	Sample		•	Spike		MSD					_	~ =	%Rec.		RPD
Analyte Chloride	Result 379	Qua		Added 252		Result 642.6	Qua	lifier	Unit			%Rec 104	Limits 90 - 110	0	2
	575			252		042.0			mg/Kg			104	90 - 110	0	20
Lab Sample ID: MB 880-595/1-A												Client S	Sample ID: I	<b>Nethod</b>	l Blank
Matrix: Solid													Prep	Type: S	Soluble
Analysis Batch: 596															
		MB	MB												
Analyte			Qualifier		RL		MDL	Unit		D	P	repared	Analyz	ed	Dil Fa
Chloride	<	<5.00	U		5.00			mg/Kg					03/19/21 ^	15:54	
Lab Sample ID: LCS 880-595/2-A										С	lient	Sample	BID: Lab Co	ontrol S	Sample
Matrix: Solid												Campio		Type: S	
Analysis Batch: 596														.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
· ·····, ···· · ···				Spike		LCS	LCS						%Rec.		
Analyte				Added		Result	Qual	lifier	Unit		D	%Rec	Limits		
Chloride				250		249.7			mg/Kg			100	90 - 110		
Lab Sample ID: LCSD 880-595/3-A									Cli	ont	Sam	nle ID:	Lab Contro	l Samn	
Matrix: Solid										un	Jan	. עו פוקי		Type: S	-
Analysis Batch: 596													Fieh	iype. c	
Analysis Buton. 000				Spike		LCSD	LCS	D					%Rec.		RPD
				Added							_	%Rec	Limits	RPD	Limi
Analyte				Added		Result	ູ(ງແລ		Unit		D	76 Ref:	LIMITS	RPII	

Eurofins Xenco, Carlsbad

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# **QC Association Summary**

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

#### Leach Batch: 593

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

#### Analysis Batch: 594

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

#### Leach Batch: 595

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

#### Analysis Batch: 596

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

Job ID: 890-380-1

Client: WPX Energy Production LLC

Project/Site: RDX Federal 17-6 **Client Sample ID: SS01** 

Date Collected: 03/16/21 13:40

Date Received: 03/18/21 08:05

**Client Sample ID: SS02** 

Date Collected: 03/16/21 13:45

Date Received: 03/18/21 08:05

Prep Type

Soluble

Soluble

Ргер Туре

Soluble

Soluble

Batch

Туре

Leach

Batch

Туре

Leach

Analysis

Analysis

Batch

Method

DI Leach

300.0

Batch

Method

DI Leach

300.0

#### Lab Chronicle

Dilution

Dilution

Factor

1

Factor

1

Run

Run

Batch

593

594

Batch

593

594

Number

Number

Prepared

or Analyzed

03/19/21 10:29

03/19/21 15:38

Prepared

or Analyzed

03/19/21 10:29

03/19/21 15:53

Analyst

Analyst

СН

СН

СН

СН

Lab

XM

XM

Lab

XM

XM

Job ID: 890-380-1

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-380-1

Lab Sample ID: 890-380-2

Lab Sample ID: 890-380-3

Lab Sample ID: 890-380-4

Lab Sample ID: 890-380-5

Lab Sample ID: 890-380-6

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**Client Sample ID: SS03** 

Date Collected: 03/16/21 13:50

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS04**

Date Collected: 03/16/21 13:55

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS05** Date Collected: 03/16/21 14:00

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS06** Date Collected: 03/16/21 14:05 Date Received: 03/18/21 08:05

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

#### Lab Chronicle

Job ID: 890-380-1

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-380-7

Lab Sample ID: 890-380-8

Lab Sample ID: 890-380-9

Lab Sample ID: 890-380-10

Lab Sample ID: 890-380-11

Lab Sample ID: 890-380-12

8
9

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

# **Client Sample ID: SS07** Date Collected: 03/16/21 14:10

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS08** Date Collected: 03/16/21 14:15 Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS09**

Date Collected: 03/16/21 14:20

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS10**

Date Collected: 03/16/21 14:25

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS11** Date Collected: 03/16/21 14:30

Date Received: 03/18/21 08:05

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

#### **Client Sample ID: SS12** Date Collected: 03/16/21 14:35 Date Received: 03/18/21 08:05

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

#### Laboratory References:

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

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# Accreditation/Certification Summary 1 Client: WPX Energy Production LLC Job ID: 890-380-1 2 Project/Site: RDX Federal 17-6 3 Laboratory: Eurofins Xenco, Midland 3 The accreditations/certifications listed below are applicable to this report. 4 Authority Program Identification Number Expiration Date Texas NELAP 06-30-21 5 6 7 8

Eurofins Xenco, Carlsbad

#### **Method Summary**

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

Job ID: 890-380-1

Laboratory	Protocol	Method Description	Method				
XM	MCAWW	Anions, Ion Chromatography	300.0				
XM	ASTM	Deionized Water Leaching Procedure	DI Leach				
		iferances -	Protocol Re				
		ASTM = ASTM International					
	quent Revisions	ASTM International V = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983					

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

#### **Sample Summary**

Collected

03/16/21 13:40

03/16/21 13:45

03/16/21 13:50

03/16/21 13:55

03/16/21 14:00

03/16/21 14:05

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03/16/21 14:20

03/16/21 14:25

03/16/21 14:30

03/16/21 14:35

Received

03/18/21 08:05

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Asset ID

Matrix

Solid

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

SS01

SS02

SS03

SS04

SS05

SS06

SS07

SS08

SS09

SS10

SS11

SS12

**Client Sample ID** 

Lab Sample ID

890-380-1

890-380-2

890-380-3

890-380-4

890-380-5

890-380-6

890-380-7

890-380-8

890-380-9

890-380-10

890-380-11

890-380-12

#### Job ID: 890-380-1

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Eurofins Xenco, Carlsbad

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ure) Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time		Received by: (Signature)	Received	(Signature)	Relinquished by:
	viously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order rom client company to Xenco, its animates and subconnectors. It easy is something to running the control of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$85,00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	o Xenco, but not analyzed	brder from client con llity for any losses of h sample submitted .	itutes a vaild purchase assume any responsib d a charge of \$5 for eac	t of samples const nples and shall not to each project an	cument and relinquishmen ble only for the cost of sar ye of \$85.00 will be applied	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its of service. Xenco will be llable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred of Xenco. A minimum charge of \$86.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not at
Hg: 1631 / 245.1 / /4/0 / /4/1		A CI CO CU PD MIN MO NI SE AG II U		D: BRCRA Sb	TCI P / SPI P 6040	analyzed	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s)
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Acetate+NaOH: Zn		(- Ex 890-380 Chain of Custor)	Vet	2.2	Reading: D.4	_	: Yes No N/A	Sample Custody Seals:
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Preservative Codes		ANALYSIS REQUEST			Turn Around	17-6	RDX Federal 1-	Project Name:
ADaPT C Other:	Deliverables: EDD L ADaP	Delive	xenergy.com	Email: Lynda.Laumbach@wpxenergy.com	Email: Lynda		(575)725-1647	Phone:
Γ.	Level III	Repor	Carlsbad, NM 88220		City, State ZIP		Carlsbad, NM 88220	City, State ZIP: (
]	_	State	5315 Buena Vista Dr		Address:		5315 Buena Vista Dr	Address:
rownfields RC sperfund	ST PRP		WPX Energy Permian, LLC	Company Name: V	Compa	LLC.	WPX Enery Permian,	
Comments	Work Order Comments		Lynda Laumbach	Bill to: (if different)	Bill to:		Lynda Laumbach	Project Manager:
n Page / of 2	www.xenco.com		Atlanta, GA (770) 449-8800					
_		Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701	ahassee, FL (850) 756-(	813) 620-2000, Tali	Tampa, FŁ (			
	Work Urder No:	Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900	Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, .	TX (432) 704-5440 M (575) 392-7550,	Midland, Hobbs, N	DIES	ABORATO	
		00, San Antonio, TX (210) 509-3334	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio,	X (281) 240-4200,	Houston, T	Ď	ヘロフラ	
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### Page 469 of 481

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Chain of Custody

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	It assigns standard terms and conditions e due to circumstances beyond the control norced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	company to Xenco, it s or expenses incurr ed to Xenco, but not	urchase order from client sponsibility for any losse for each sample submitt	les constitutes a valid p shall not assume any r roject and a charge of \$	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses ar of Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be end of Xenco.	Notice: Signature of this d of service. Xenco will be I of Xenco. A minimum cha
Hg: 1631 / 245.1 / 7470 / 7471	Ni Se Ag TI U	Cd Cr Co Cu Pb Mn Mo Ni S	3b As Ba Be	TCLP/SPLP 6040: ORCRA Sb As Ba Be	d TCLP/SPI	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s
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NaCH+Ascorbic Acid: SAPC			X (N		Corrected Temperature:	Corre	Total Containers: /
Zn Acetate+NaOH: Zn			/letl		Temperature Reading:	YES NO NIA	Sample Custody Seals:
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>			nod	Pa		Yes No NHA	Cooler Custody Seals:
NaHSO4: NABIS			802	<b>D</b>	Thermometer ID:	Yes No	Received Intact:
H₃PO₄: HP			21)	Kes No	No Wet Ice:	<b>&gt;T</b> Temp Blank: Yes	SAMPLE RECEIPT
H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na		05)	))	L	the lab, if rec		PO #
HCL: HC HNO3: HN				TAT starts the day received by	TAT starts the	Aurile Para	Sampler's Name:
Cool: Cool MeOH: Me				2-Day	Due Date:	Eduly Compy NM	Project Location
None: NO DI Water: H <sub>2</sub> O				ARush Code	Routine		Project Number:
Preservative Codes	EST	ANALYSIS REQUEST		Turn Around	Turn	ROX Codoral 17-6	Project Name:
ADaPT L Other:	Deliverables: EDD		wpxenergy.com	Lynda.Laumbach@wpxenergy.com	Email:	(575)725-1647	Phone:
	Reporting:Level II Level III		Carlsbad, NM 88220	City, State ZIP:		Carlsbad, NM 88220	City, State ZIP:
]	State of Project:		5315 Buena Vista Dr	Address:		5315 Buena Vista Dr	Address:
rownfields RC Sperfund	ST PRP	LLC.	WPX Energy Permian,	Company Name:		WPX Enery Permian, LLC.	
Work Order Comments	Work C	5	Lynda Laumbach	Bill to: (if different)		Lynda Laumbach	Project Manager:
<u>co.com</u> Page 2 of 2	www.xenco.com	70) 449-8800	Atlanta, GA (770) 449-8800				
	6701	Hobbs, NM (5/5) 392-550, Carisbad, NM (5/5) 986-3199, Frioeinix, AZ (450) 555-0500 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701	rallahassee, FL (85	pa, FL (813) 620-2000,	Tam		
			140, EL Paso, TX (9	Midland, TX (432) 704-54	IN .	ABORATORIE	
		Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334	0, Dallas, TX (214)	uston, TX (281) 240-420	н	XIIZDO	

### Received by OCD: 7/19/2024 8:47:33 AM

### 3/22/2021

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Chain of Custody

Job Number: 890-380-1

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: WPX Energy Production LLC

### Login Number: 380 List Number: 1

Login Number: 380			List Source: Eurofins Carlsbad	_
List Number: 1				5
Creator: Clifton, Cloe				
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			8
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			9
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			13
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	N/A			

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

13

Job Number: 890-380-1

List Source: Eurofins Midland

List Creation: 03/19/21 12:51 PM

### Login Sample Receipt Checklist

Client: WPX Energy Production LLC

Login Number: 380 List Number: 2 Creator: Kramer, Jessica

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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

QUESTIONS

Action 365586

QUESTIONS	
Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	365586
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

#### QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2019548894
Incident Name	NRM2019548894 RDX 17 FEDERAL COM #006H @ 30-015-39308
Incident Type	Produced Water Release
Incident Status	Reclamation Report Received
Incident Well	[30-015-39308] RDX 17 FEDERAL COM #006H

#### Location of Release Source

Please answer all the questions in this group.	
Site Name	RDX 17 FEDERAL COM #006H
Date Release Discovered	07/05/2020
Surface Owner	Federal

#### Incident Details

Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	Νο
Has this release endangered or does it have a reasonable probability of endangering public health	Νο
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

#### Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission Crude Oil Released (bbls) Details Not answered. Cause: Equipment Failure | Flow Line - Injection | Produced Water | Released: 35 BBL | Produced Water Released (bbls) Details Recovered: 5 BBL | Lost: 30 BBL Is the concentration of chloride in the produced water >10,000 mg/l Yes Condensate Released (bbls) Details Not answered. Natural Gas Vented (Mcf) Details Not answered. Natural Gas Flared (Mcf) Details Not answered. Other Released Details Not answered. Are there additional details for the questions above (i.e. any answer containing Not answered. Other, Specify, Unknown, and/or Fire, or any negative lost amounts)

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

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QUESTIONS, Page 2

Action 365586

**QUESTIONS** (continued) OGRID:

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	365586
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e	. gas only) are to be submitted on the C-129 form.

Initial	Response

The responsible party must undertake the following actions immediately unless they could create a s	afety hazard that would result in injury.
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.
	ation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of ted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of valuation in the follow-up C-141 submission.
to report and/or file certain release notifications and perform corrective actions for releat the OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are required ases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 07/19/2024

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

**QUESTIONS** (continued)

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	365586
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

#### QUESTIONS

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

#### Remediation Plan

Requesting a remediation	plan approval with this submission	Yes
1 0		on associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.
	al extents of contamination been fully delineated	Yes
Was this release entirely c	ontained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 CI B)	37900
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	354
GRO+DRO	(EPA SW-846 Method 8015M)	354
BTEX	(EPA SW-846 Method 8021B or 8260B)	0.1
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
	NMAC unless the site characterization report includes complete elines for beginning and completing the remediation.	ed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMA
· · ·		
· · ·	Il the remediation commence	04/03/2024
On what estimated date wi		04/03/2024 04/09/2024
On what estimated date wi On what date will (or did) th	Il the remediation commence	
On what estimated date wi On what date will (or did) th On what date will (or was)	Il the remediation commence he final sampling or liner inspection occur	04/09/2024
On what estimated date wi On what date will (or did) th On what date will (or was) What is the estimated surfa	Il the remediation commence he final sampling or liner inspection occur the remediation complete(d)	04/09/2024 04/26/2024
On what estimated date wi On what date will (or did) th On what date will (or was) the What is the estimated surfate What is the estimated volume	Il the remediation commence ne final sampling or liner inspection occur the remediation complete(d) ace area (in square feet) that will be reclaimed	04/09/2024 04/26/2024 51715
On what estimated date wi On what date will (or did) th On what date will (or was) What is the estimated surfa What is the estimated volum What is the estimated surfa	Il the remediation commence he final sampling or liner inspection occur the remediation complete(d) ace area (in square feet) that will be reclaimed me (in cubic yards) that will be reclaimed	04/09/2024 04/26/2024 51715 9740.1

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

QUESTIONS, Page 3

Action 365586

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

QUESTIONS, Page 4

Action 365586

QUESTIONS (continued)	
Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	365586
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

#### QUESTIONS

Remediation Plan (continued)

(Select all answers below that apply.)	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	Not answered.
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
r Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed eff ich includes the anticipated timelines for beginning and completing the remediation.	orts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NM

local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 07/19/2024
The OCD recognized that proposed remediation measured may have to be minimally adjusted in second	redence with the physical realities apparentared during remediation. If the responsible party has any need to

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

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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

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Action 365586

QUESTIONS (continued)	
Operator:	OGRID:
WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	246289
	Action Number:
	365586
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

### QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of	the following items must be confirmed as part of any request for deferral of remediation.
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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

QUESTIONS, Page 6

Action 365586

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**QUESTIONS** (continued) Operator: OGRID: WPX Energy Permian, LLC 246289 Devon Energy - Regulatory Action Number Oklahoma City, OK 73102 365586 Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	329052
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/11/2024
What was the (estimated) number of samples that were to be gathered	25
What was the sampling surface area in square feet	20625

**Remediation Closure Request** 

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.		
Requesting a remediation closure approval with this submission	Yes	
Have the lateral and vertical extents of contamination been fully delineated	Yes	
Was this release entirely contained within a lined containment area	No	
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes	
What was the total surface area (in square feet) remediated	51715	
What was the total volume (cubic yards) remediated	9740	
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes	
What was the total surface area (in square feet) reclaimed	21692	
What was the total volume (in cubic yards) reclaimed	9740	
Summarize any additional remediation activities not included by answers (above)	The Site was remediated in accordance with an approved Remediation Work Plan, ultimately removing 9,740 CY of residual impacted soil and has been backfilled with clean, locally sourced material, and recontoured to match the original conditions as close as possible.	
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents o final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including nutfication to the OCD when reclamation and re-vegetation are complete.		
	Name: James Raley	

I hereby agree and sign off to the above statement	Title: EHS Professional
	Email: jim.raley@dvn.com Date: 07/19/2024

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Operator:

District IV

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

QUESTIONS, Page 7

Action 365586

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District III

WPX Energy Permian, LLC

Devon Energy - Regulatory

Oklahoma City, OK 73102

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**QUESTIONS** (continued) OGRID: 246289 Action Number 365586 Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

#### QUESTIONS

Reclamation Report		
Only answer the questions in this group if all reclamation steps have been completed.		
Requesting a reclamation approval with this submission	Yes	
What was the total reclamation surface area (in square feet) for this site	21692	
What was the total volume of replacement material (in cubic yards) for this site	9740	
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.		
Is the soil top layer complete and is it suitable material to establish vegetation	Yes	
On what (estimated) date will (or was) the reseeding commence(d)	08/01/2024	
Summarize any additional reclamation activities not included by answers (above)	Remediation area has been restored with clean backfill material and will be re-seeded with BLM Seed Mixture #3 following the appropriate BLM re-seeding guidelines for seed to sqft area ratio.	
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.		
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 07/19/2024	

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

District III

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

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

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

QUESTIONS, Page 8

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Action 365586

**QUESTIONS** (continued) Operator: OGRID: WPX Energy Permian, LLC 246289 Devon Energy - Regulatory Action Number Oklahoma City, OK 73102 365586 Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

#### QUESTIONS

Revegetation Report

Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied

Requesting a restoration complete approval with this submission

No Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.

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

CONDITIONS

Action 365586

CONDITIONS		
Operator:	OGRID:	
WPX Energy Permian, LLC	246289	
Devon Energy - Regulatory	Action Number:	
Oklahoma City, OK 73102	365586	
	Action Type:	
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

### CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	8/28/2024